The Hashemite Kingdom of Jordan
Agricultural Resources Management Project
Mid-Term Evaluation
Evaluation Report

June 2001

Report No. 1159
The Hashemite Kingdom of Jordan  
Agricultural Resources Management Project (392-JO)  
Mid term Evaluation  
EVALUATION REPORT  

Table of Contents  

Currency Equivalents iv  
Fiscal Year of Government iv  
Abbreviations and Acronyms iv  
Maps vii  
Agreement at Completion Point xiii  
Executive Summary xxiii  

I. INTRODUCTION 1  
II. COUNTRY AND SECTORAL CONTEXT 2  
   A. Macro-Economic Situation 2  
   B. Poverty and Social Development Initiatives 2  
   C. The Agricultural Sector 4  
   D. Agricultural Finance 5  
   E. Major Donor Interventions 5  
III. THE PROJECT 7  
   A. Project Design 7  
   B. Design Considerations 10  
IV. IMPLEMENTATION PROGRESS 12  
   A. Resource Management 12  
      1. Design 12  
      2. Implementation Progress 12  
   B. Agricultural Development 14  
      1. Design 14  
      2. Implementation Progress 15  
   C. Rural Financial Services 16  
      1. Design 16  
      2. Implementation Progress 17  
   D. Women’s Development Programme 18  
      1. Design 18  
   E. Project Management and Coordination 19  
      1. Design 19  
      2. Findings 19  
V. EFFECTS AND IMPACTS 26  
   A. Socio-economic Changes 26  
   B. Environmental Impacts 26  
   C. Agricultural Production Impacts 27
D. Credit Effects and Impacts 28  
E. Institutional Strengthening 29  

VI. CONCLUSIONS 30  
A. Summary 30  
B. Resource Management 30  
C. Agricultural Development 30  
D. Rural financial Services 31  
E. Women’s Development Programme 31  
F. Beneficiary Profiles 32  
G. Project Management 32  
H. Institutional Strengthening 33  
I. Sustainability of Project Interventions 33  

VII. ISSUES 34  
A. ISSUE 1: RE-ALLOCATION OF FUNDS 34  
1. Proposals from the Project Management 34  
2. Cost Implications 36  
3. MTE Assessment of Proposals 37  
B. ISSUE 2: PARTICIPATION IN THE PROJECT 38  
1. The Present Situation 38  
2. The Way Forward 39  
C. ISSUE 3: THE APPROACH TO CREDIT 42  

VIII. RECOMMENDATIONS 43  
A. General Recommendations 43  
B. Resource Management 43  
C. Agricultural Development 44  
D. Rural Financial Services 44  
E. Women’s Development 45  
F. Project Management, Coordination and Institutional Strengthening 46  

IX. LESSONS 47  
A. The Sequence of Project Processing 47  
B. Institutional Strengthening 47  
C. Credit Institutions and The Poor 47  
D. Commitment to Community Participation 48  
E. Impact Measurements facilitate Project Management 48  
F. Reaching Intended Beneficiaries 48  

Figures:  
Figure 1: Project Organization  
Figure 2: Project Organization Chart (PMU)  
Figure 3: Organization of Field Units
Tables:
Table 1. Summary of Project Activities by Components.
Table 2. Project Costs and Financiers by Components. USD million
Table 3. Progress in on-farm soil and water conservation
Table 4. Progress in Fruit Tree Planting, Fencing and Rehabilitation
Table 5: ARMP Credit Disbursements Against Targets
Table 6: ARMP – Staff Qualifications
Table 7: ARMP – Staff Training Programme Undertaken to date
Table 8. Number of beneficiaries for on-farm soil and water conservation programme
Table 9: Revised Targets – Physical
Table 10: Project Cost Changes Required for Resource Management
Table 11: Project Cost Changes Required in Agricultural Development

Appendices:
Appendix 1: Project Reported Results at end June 2000 51
Appendix 2: Small Loans Credit Proposals 54
Appendix 3: Community Participation Proposals 58
Appendix 4: People Met 66

WORKING PAPERS
Working Paper 2: Rural Financial Services 109
Working Paper 3: Socio Economic Assessment 143
Currency Equivalents
(October 2000)

Currency Unit = Jordanian Dinar (JOD)

USD 1 = JOD 0.708

JOD 1 = USD 1.4124

Fiscal Year of Government and ACC

1 January to 31 December

Abbreviations and Acronyms

ACC Agricultural Credit Corporation
AFESD Arab Fund for Economic and Social Development
AMIR Access to Microfinance and Improved Implementation of Policy Reform
ARMP Agricultural Resources Management Project
AWPB Annual Work Plan and Budget
CBJ Central Bank of Jordan
CBO Community Based Organization
CDCs Community Development Centres
COSOP Country Strategies Opportunities Paper
CP Community Participation
CWG Community Women’s Group
ECP Extended Cooperation Programme
FAO Food and Agricultural Organization of the United Nations
FDA Field Directorates of Agriculture
GDP Gross Domestic Product
GFJW General Federation of Jordanian Women
GOJ Government of Hashemite Kingdom of Jordan
GTZ German Agency for Technical Cooperation
HDP Highlands Development Project
ICARDA International Centre for Agricultural Research in Dry Areas
IFAD International Fund for Agricultural Development
IGAs Income Generating Activities
IMF International Monetary Fund
JOD Jordanian Dinar
JOHUD Jordanian Hashemite Fund for Human Development
KiW Kreditanstalt für Wiederaufbau
M&E Monitoring and Evaluation
MFI Micro-Finance Institutions
MIS Management and Information System
MIWR Ministry of Irrigation and Water Resources
MOA Ministry of Agriculture
MOP Ministry of Planning
MOSD Ministry of Social Development
MTE Mid term Evaluation
NAF National Aid Fund
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCARTT</td>
<td>National Centre for Agricultural Research and Technology Transfer</td>
</tr>
<tr>
<td>NEF</td>
<td>Near East Foundation</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NHF</td>
<td>Noor Al Hussein Foundation</td>
</tr>
<tr>
<td>OR</td>
<td>Olive Rehabilitation Programme</td>
</tr>
<tr>
<td>PCC</td>
<td>Project Coordination Committee</td>
</tr>
<tr>
<td>PD</td>
<td>Directorate of Projects</td>
</tr>
<tr>
<td>PMU</td>
<td>Project Management Unit</td>
</tr>
<tr>
<td>PRA</td>
<td>Participatory Rural Appraisal</td>
</tr>
<tr>
<td>PROMIS</td>
<td>Project Management Information System</td>
</tr>
<tr>
<td>PSC</td>
<td>Permanent Steering Committee</td>
</tr>
<tr>
<td>RACC</td>
<td>Regional Agricultural Coordination Committee</td>
</tr>
<tr>
<td>RFS</td>
<td>Rural Financial Services</td>
</tr>
<tr>
<td>RRA</td>
<td>Rapid Rural Appraisal</td>
</tr>
<tr>
<td>SO</td>
<td>Social Organizer</td>
</tr>
<tr>
<td>SPP</td>
<td>Social Productivity Programme</td>
</tr>
<tr>
<td>SWCs</td>
<td>Soil and Water Conservation Works</td>
</tr>
<tr>
<td>TA</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>UNIFEM</td>
<td>United Nations Development Programme for Women</td>
</tr>
<tr>
<td>WB</td>
<td>The World Bank</td>
</tr>
<tr>
<td>WFP</td>
<td>World Food Programme</td>
</tr>
<tr>
<td>WID</td>
<td>Women in Development</td>
</tr>
<tr>
<td>WSMP</td>
<td>Watershed Management Project</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
</tbody>
</table>
JORDAN

IFAD on-going financed activities
JORDAN
Agricultural Resource Management Project (ARMP)
Mid-Term Evaluation
Project Area
Lesson 1: Credit for the Poorest

The Mid term Evaluation (MTE) found that the Agricultural Credit Corporation (ACC) had developed a very sound system of delivery of credit under ARMP, with due attention to sustainability of its operations. By promoting self-employment and income generation in resource-poor areas of Karak and Tafila, the ARMP credit activities, albeit in limited way, are assisting Jordan to resolve the two major macroeconomic challenges of poverty and unemployment and are also contributing to gender equity. To date, credit disbursements under ARMP constitute 76% of the appraisal target. This impressive achievement is due to much greater demand than anticipated for Income Generating Activities (IGA) loans from rural women. By comparison, credit disbursements for land consolidation and supplementary Soil and Water Conservation Works (SWCs) are far below the appraisal estimate, mainly because the demand for such loans was grossly over-estimated at the design stage.

The main weakness is that assetless poor and destitute rural women within the target group have no access to credit because of ACC’s collateral conditions and the absence of any specific intervention or mechanism under ARMP to encourage and direct credit to these rural disadvantaged. Therefore although examples can be found where the effects of the credit have been to mitigate poverty, and these should not be under-estimated, these are specific to those cases where there is a guarantor acceptable to the bank.

Hamdiya al Mawees is a forty-three year old widow from Tafila. Her husband died nine years ago and left her to look after five children. The oldest is now 25 years old and the youngest is 11. She confesses that her worries make her look older. Her eldest son has joined the Army and gets a monthly salary of JD 130, and in addition her father supports her with JD 16 per month. Hamdiya was perpetually worried about how she would support her family, until she heard about the Agricultural Resource Management Project and their programme of training and credit for women. As the head of her household Hamdiya automatically qualified for training and had priority as a loan applicant. She decided to revive her work with dairy processing which she had undertaken many years before, but had left while her children were still young. Through training she improved her earlier skills in making Lebaneh, Leban and Jubneh. She then received a loan of JOD 1500 from the Agricultural Credit Corporation to purchase goats and equipment; this allows her to have a regular income from cheese making and from the sale of her growing stock of goats.

Although mitigating poverty is a high priority for the Government of Jordan (GOJ), ACC’s loan terms and conditions are not always appropriate to ARMP’s poverty alleviation objectives especially those targeted to rural women. In addition, the present loan repayment terms used for IGAs can be penalizing the borrowers because they have to sustain the burden of debt service for unduly long periods. ACC needs to be concerned with the viability of the activity financed, in addition to the ability of the borrower or the guarantor to repay the loan. This means relating the loan size and repayments to a typical activity model and cashflow prepared and updated for different packages. To address these concerns the MTE has formulated, with the evaluation partners, a detailed proposal for an appropriate credit window.
Recommendations:

- **Extending Credit Outreach.** To provide women from the most disadvantaged households with access to credit, the project management and ACC should, in mutual consultation, initiate action to develop alternative mechanisms that broaden the credit outreach including the opening of a special window through ACC with appropriate support to mitigate lending risks. The objective should be to demonstrate the effectiveness and sustainability of a micro-credit development model (this is further detailed in the report).

- **Determination of Loan Amounts and Repayment Periods.** Loan amounts should be determined by the outlay required for the IGA financed, as the burden of debt service for a higher loan than necessary results in a reduction of the net financial impact to the borrower. In addition, instead of the present standard period of 8 years, loan repayment periods should be adjusted to the net cashflow of the activity financed and include, where justified, appropriate grace periods. The implementation of these measures would permit ACC to service a larger number of borrowers with the available loan funds.

- **Increasing Funds Allocation for the Women’s Programme.** Since the demand for loans for land consolidation is very low, consideration should be given to the re-allocation of these credit funds to meet increased demand under the women’s credit programme. In addition, further use of substantial funds allocated for institutional strengthening is unlikely, and these might also be used in the credit programme.
Lesson 2: The Selection of Income Generating Activities

The MTE found that there were many positive impacts from the promotion of IGAs. The project lending has helped to generate rural employment, developed entrepreneurial skills among rural women and enhanced their economic clout and recognition. Goat and sheep breeding loans, and to a lesser extent loans for dairy/milk processing were found to be having positive impacts in terms of returns to family labour, addition to household income, and improvements in family nutrition. The impact is, however, limited in the case of loans for food processing due mainly to marketing problems. It was estimated that for the 220 women borrowers who had actually undertaken enterprise development with loans from ACC at the time of the MTE, the average increase in incomes has been about JD 150 per activity. This represents an increase in annual family income of about 10% to 12%. Despite this, one of the findings from the socio-economic survey conducted by the Ministry of Agriculture (MOA) was that out of the women who had taken loans from ACC under the project, only 37% had actually started enterprises. The principal reason given was the inability to sell the produce from the IGAs. This represents a major constraint in achieving the poverty alleviation objectives of the project.

The MTE concluded that at the moment women do not have access to sufficient information or guidance to make informed choices about their investment decisions, and these choices are far too limited and, in many instances, insufficiently financially attractive. In addition there appeared to be considerable potential for assisting women to undertake these activities on a group basis.

Women attending the training centre in Al-Mazar District. This course has been organized under the Women’s Programme of ARMP to improve women’s skills in processing figs, grapes, cucumbers, olives and dairy processing, especially making Lebaneh and Jameed from goat’s milk. After training, graduates are potentially eligible for credit from ACC, which is used to buy raw materials to expand the scope of some traditional activities and initiate new ones.

An example of a course graduate is Samiya of Al Qadisiya village in Tefila (220). Samiya’s husband’s salary is not sufficient to feed her large family (of ten children): when she heard about the training courses available through ARMP she decided to join. After qualifying she received a loan of JOD 1500 with which she has bought 15 goats. She uses the milk to make dairy products both to feed her family and to sell, and also sells newborn goats. Her husband’s salary meets the monthly loan deductions, which service her loan.

In addition, the cohesiveness of the overall programme and its impact can be increased if a comprehensive approach is used to address the development process for women in its totality. The gaps are in information, appropriate levels of funding geared to the cashflows of the selected IGAs, marketing assistance and generalized support and encouragement. There is a need for the beneficiaries to become the centre of the development effort, and for the services provided to be focussed on responding to their needs.
Recommendations:

- **Improved Technical Support.** The appraisal included Technical Assistance (TA) intended to fill the knowledge gaps and refine the project design. This TA, which has not so far been activated, should be immediately initiated, covering:
  - a feasibility study to identify a wider range of suitable and profitable income generating activities;
  - Non-Governmental Organization (NGO) support under contract to assist in pre-credit activities for women, including group formation and training;
  - action-oriented market research to assist women market their products.

- **Production and Marketing centres.** The project needs to address the twin problems faced in establishing and maintaining production standards, and in marketing. The approach recommended is to establish, on a trial basis, district-based production and marketing centres, using funds which would otherwise be unutilized from the women’s programme. These centres should be established in districts where NGOs or Community Based Organizations (CBOs) are willing to take the responsibility for implementation, with the project supporting initial set-up costs. The centres could also be used for training. Technical assistance should be employed for developing proper brand names, the standardizing of product specifications, proper packaging and sales. They could also act as consolidation and marketing outlets for village based production units, which would comprise groups formed to undertake production activities jointly. Group based activities should be encouraged, possibly by the provision of storage and processing equipment.

- **Staff Training.** There is a need to provide institutional and technical support to Women in Development (WID) staff through additional training in enterprise development, group formation, communication skills and monitoring and evaluation skills.
Lesson 3: Participation in the Project

Although the project design describes an overall participatory community-based approach for the implementation of ARMP, in practice there is no systematic approach to community participation and in most cases ARMP and ACC staff deal with individual beneficiaries. There is a strategic and urgent need both in the project and for the benefit of MOA in its approach to implementing development projects generally, for more participatory approaches to mainstream. Unless this opportunity is taken, the longer-term benefits, especially in terms of sustainability and the transfer of responsibility for setting the development agenda to the local communities, will be lost. For IFAD, it is important that GOJ demonstrate a growing commitment to such approaches, so that project designs can be implemented in the way agreed.

Under the soil and water conservation, agricultural development and olive rehabilitation programmes, community participation would help to disseminate information more widely and would assist with proper identification of intended beneficiaries. Under the mini-dams, hafirs and spring rehabilitation components, community participation would ensure that scheme location and design reflects the needs of the beneficiaries, would help to mobilize community resources and would contribute to scheme sustainability. Community participation in the women’s programmes would help to manage the enterprises on a more professional basis and create opportunities for economies of scale in production and marketing.

For MOA overall, a revised approach to include a greater degree of community participation in the second half of the project would provide the opportunity to assess the increased benefits from this approach and would expose staff to a learning process for the benefit of future projects.

The participation of an NGO to lead the social intermediation process would be highly desirable, especially in some of the collective projects such as spring rehabilitation, mini-dams and Hafir construction. However, the current experience and approach of NGOs with spring rehabilitation does not add much value to ARMP. There were no NGOs found in the project area dealing with community participation aspects of mini-dams and Hafirs. The only real scope for participation of NGOs under ARMP seems to be with NGOs operating marketing programmes for women. For other components, it is concluded that ARMP should itself develop an approach to community participation that would add value to its work and enhance the sustainability of its investments.
Recommendations:

It is recommended that MOA utilize the remaining three years of project life to develop its own approach to participatory methods for use in its projects. This would involve a number of integrated activities, as follows:

- A clear policy statement on participation needs to be made and operational guidelines and instructions prepared for the implementation of the policy.
- In the case of ARMP, the post of Community Development Officer in the Project Management Unit (PMU), which was scrapped at the beginning of the project, needs to be reinstated, and four more field officers appointed in the Field Units.
- The participatory approach needs to be integrated into the work plans and work habits of all members of the ARMP team or it will be unlikely to succeed, hence an orientation, training and visits programme needs to be devised for ARMP and MOA headquarters staff in community participation approaches to agricultural development.
- ARMP should make use of its technical assistance budget to employ short-term TA for community participation.
- Once these steps have been undertaken, then community participation approaches appropriate to each activity (described in detail in the report) should be introduced in the remaining period of project life. The community participation approach suggested differs from one activity to the other and is designed to improve potential development impact by empowering the community for local level decision-making for agriculture and resource management.
- There is need for careful monitoring of the value added and impact of adopting a community participation approach. The existing monitoring and data collection system should therefore be upgraded to include impact indicators for community participation.
Lesson 4: Extending Environmental Benefits

A major aim of ARMP is to limit environmental degradation by enhancing soil and water conservation. The recent IFAD Country Strategy and Opportunities Paper (COSOP) emphasized the critical situation in Jordan with respect to water availability, pointing out that water resources are presently being exploited at 150% of sustainable yield levels. For water conservation, the project should easily exceed its appraisal target, resulting not only in more water for livestock, but also increased recharge of groundwater. In addition the achievements for stone walls are impressive – so far about 70% of appraisal targets have been met.

Yasin Muhammad Rashaidi lives in the village of Rashaidi in the Qasr District of Karak Governorate. His forefathers were Bedouin herders who moved with their herds of goats and sheep in search of fodder and water. In the 1950’s his family chose to settle close to the Al Agon spring in the Mujeb Valley. In 1991 the government of Jordan leased Yasin land for a house and 11 dunums (1.1 ha) for cultivation. He started by growing barley and wheat with water brought from the Al Agon spring five times a week by the family tanker, which he shares with his five brothers. Recent changes have made it unprofitable for him to keep his livestock, so three years ago he sold his goats and sheep. To keep his family he has a job with the army, which pays him JOD 130 per month, and he estimates that his crops give a net return of about JOD 200 per annum.

In early 1997, Yasin heard about the IFAD funded Agricultural Resources Management Project through staff members of the project on a field visit to his village. He applied for the development of his land under the soil and water conservation component, and received financial assistance worth JOD 1130 for the construction of a cistern, stone wall terracing and fencing to protect the land against free grazing animals. He contributed labour and materials worth JOD 900 for enlarging the cistern from his own sources. With the help of the project, he planted his newly developed land with olives. He hopes to earn a yearly income of upto JOD 1000 once the olive trees start fructing. He is grateful to the project for helping him undertake investments that were beyond his capacity.

The project staff from ARMP also consulted his village before building the Om-Ganeem mini-dam about 1-2 kilometres from his village. He hopes that once the rain comes, this dam will help to collect and store water and help him to reap greater benefits from the investment in his land. Women and children from the Rashaidi clan pose in front of their house to which they can now lay claim.

The impacts of soil and water conservation will not become immediately apparent as it takes a number of years for the stone walls, in particular, to become effective in reducing soil erosion and water runoff. Nevertheless, as technical interventions, these conservation structures are virtually permanent (with minimum maintenance) and they will therefore directly help to realize government and project objectives. The combined effect of SWC improvements will result in the increased robustness of the farming systems, and greater water availability for both irrigation and municipal/domestic uses. On reclaimed upland areas the fruit tree planting programme is likely to provide useful increases in incomes for the beneficiaries: the MTE estimated about JOD 250 per dunum for new planting, which should be adequate to encourage planting and help realize the investment in conservation activities. Not surprisingly, there has been a continuing high demand by farmers for participation in the SWC programme as a whole. Experience at the mid-term has led the Project Management to suggest the adjustment of physical targets and to propose a re-allocation of funds, in order to expand the SWC programme.

Recommendations:

- The project funds should be re-allocated along the lines put forward by the project management. However, before a re-allocation is submitted the project should examine the full consequences of the re-allocation on all project interventions, submitting justifications for the quantitative revisions. In addition the increased number of beneficiaries and the flow of benefits should be projected. ARMP should consider asking IFAD to assist with the preparation of this document, and should indicate the increased contributions expected from GOJ and the beneficiaries.
Lesson 5: Water for Irrigation

1. Springs. Springs are the major water resource for many villages and provide domestic water, drinking water for animals and supplementary irrigation for crops, particularly perennial tree crops (such as olives, grapes and figs) and vegetables. The Spring Rehabilitation programme seeks to protect springs against falling debris and contamination from livestock and other sources, while the main channels are lined to reduce water losses. A lower limit of 2 dunum was placed on involvement in this activity. The MTE assessed that the project had achieved 43% of its spring rehabilitation programme (and 141% of the canal rehabilitation target), with most spring rehabilitation works appearing to be well constructed. Overall, the MTE considered that the project efforts in spring rehabilitation were sustainable and concluded that these activities would increase the amount of water available in the field by about 25-33%, which would ultimately lead to a sustained productivity increases.

However, the MTE concluded that limited staff numbers and shortage of transportation was affecting this programme. Each District Field Unit has only one project extension officer responsible for spring rehabilitation (along with their other duties in olive rehabilitation and cereal crop demonstrations), and there are no Field Engineers located in the districts. Increased beneficiary consultation and involvement, although desirable, would exacerbate this situation. In addition the lower area limit is excluding some of the poorest and most needy farmers from participating.

The Al-Hashimiya spring in Al Aina in Al Mazar, which has been rehabilitated under ARMP. Two farmers pose in front of the renovated spring; the families of these farmers have relied on the spring for centuries for irrigating their farms. Water rights are linked with land rights and each family has a well-defined water share, which is based on its land holding in the spring command. Each family contributes to the maintenance of springs on the basis of its water share. However, Bedouin families enjoy free use rights to water for drinking and feeding their livestock, even though they have nothing to do with the development and maintenance of these springs.

A Bedouin woman taking water for her household from a spring rehabilitated by the project in Wadi Bin Hammad in the Qasr District.

2. Cisterns. The MTE concluded that cistern construction and rehabilitation was an important mechanism for achieving project objectives: in addition they facilitate savings on the purchase of (domestic) water, which can range from JOD 0.4 to JOD 5 per m$^3$. So far 1 170 cisterns have been completed, covering about 70% of the number of farms included in the SWC programme. This number represents about 37% of the targeted number of cisterns. There has been a continuing high demand by farmers for cisterns, however substantial under-costing at appraisal has resulted in expenditure of almost 64% of the budget. Management proposals for the second half of the project are to increase in the volume of water stored in cisterns by nearly 20% above present plans, and to rehabilitate old 100 cisterns.
A cistern installation at Rabba in Qasr. The project assists farmers who have developed their land with SWC structures to install cisterns. This ancient technology, practised by the Romans, relies on building an underground (usually) tank of about 30 cu m capacity, which is sited both to collect rainfall and also to be able to irrigate the planted area by gravity. These days farmers also fill the cisterns by buying water. The cistern walls and the collecting apron are lined to make them impermeable and a settling tank is often included to reduce the amount of sediment going into the cistern. Without a small water supply it is very risky for farmers to try to establish trees or any other crops on newly developed land. Many of old traditional cisterns have fallen into disrepair. The users of these traditional cisterns, which are presently not covered by project activities, claim that they are willing to provide free labour if ARMP is able to support the rehabilitation of these cisterns.

Bedouin woman taking water from a traditional cistern in the vicinity of the Om-Ganeem dam. Once the rains come these women hope to collect water from the mini-dam which is in close proximity to their tents.

Recommendations:

- Additional resources, including a field engineer and vehicle, should be provided in each field unit to be responsible for spring rehabilitation and canal lining activities. This would allow for greater concentration of effort on spring rehabilitation, plus greater beneficiary involvement in all the activities.
- The size restriction of two dunums should be lifted to allow staff to work with groups of farmers in spring areas, both for technical reasons (common spraying against pests such as scale insects and olive stem borer) and to increase benefits from spring rehabilitation works.
- The proposed 30% increase in the number of cisterns (from 1 730 to 2 240) should be approved since there is a high demand from farmers and there are substantial potential benefits in providing supplementary irrigation, especially during the planting and establishment phase of fruit trees. The overall target should be reviewed again towards the end of the project to determine if it could be increased further.
- Consideration should also be given to widening the cistern activity to include farmers that already have fruit trees and meet poverty criteria, who are not presently included in the soil conservation programme, including farmers who have participated in previous programmes.
- There should be an expanded demonstration and field testing of other water harvesting methods (such as micro-catchments) by NCARTT/Extension system, with the project role including the identification of farmers and assisting in the organization of field days and training.
Lesson 6: Poverty Criteria for Reaching the Poor

There are several factors in the ARMP criteria that have the potential for excluding the poor. This exclusion could happen as a result of the minimum land criteria, the requirement to produce funds up-front for some of the project activities, the submission of original land papers for SWC activities (which the poor are reluctant to do), and the requirement for monthly salary deductions for loans. ARMP has no records of the socio-economic profiles of the beneficiaries. Using proxy indicators for determining the income status of the beneficiaries, such as educational level, family size and source of employment and comparing these with the results of the recent MOA survey it appears that the beneficiaries of ARMP can generally not be described as the poorest. ACC records some information on the income and land holdings of its borrowers; these figures indicate that in Karak and Tafila, households that have taken loans from ACC have incomes that are 100% and 81% above the GOJ poverty lines for the respective Governorates. The lesson is that the poor and vulnerable households have to be specifically targeted if they are the intended beneficiaries of a programme.

Maliha Maita, her husband and son from Rabba village in Qasr. Maliha’s husband is retired from the army and gets a monthly pension of JD 100. To support their five children the family supplements the pension by farming, and, with the assistance of the project, has been able to develop 50 dunums (5.0 ha) of land under the project’s SWC component, for cereal crop production and the development of an olive orchard. This was only possible because part of the land was transferred into Maliha’s name, and illustrates a local peculiarity over land holdings which causes difficulties for the targeting of project SWC activities. The development of their land will help in decreasing soil erosion and help in water conservation.

Estimates of how poverty and gender are related vary. The Living Conditions Survey of 1996 indicated that there was no significant difference in poverty by gender. However, a study of poverty in the Highlands\(^1\) showed that women headed households are poorer and with less economic assets compared to male-headed households. These figures suggest that unless women are specifically targeted they will not have access to loans for land development. Women reportedly have difficulty obtaining loans from ACC for activities outside the specific women’s programme, primarily due to the lack of land and the required collateral. However, no specific effort is made to target female-headed households under the SWC and agricultural development programmes\(^2\).

Recommendations:

- **Poverty criteria are needed to identify the poor – not landholdings.** The approach to targeting the poor, female headed households and households with a greater reliance on agriculture has to be carefully determined and included in the operating policy and procedures of the project. ARMP is in a strong position to reconcile the twin objectives of poverty alleviation and agriculture growth, but only if the selection criteria are relaxed. The recommendation is for ARMP management and staff to examine the operating procedures of the project to identify changes necessary to re-orient their approach, and so to make targeting of the poor more realistic.

- **There is a need specifically to reinforce a targeting criterion for female headed households, to ensure that such households are not being excluded from benefiting from project activities.**

---

\(^1\) Poverty Identification Study in the Highland Regions of Jordan. Dr. Ahmad Abu Shaikha and Nadia Takriti.

\(^2\) Although women’s names appear in the list of beneficiary farmers under the soil and water conservation programme, these are women whose husbands have transferred land to their names to benefit from this intervention.
The Hashemite Kingdom of Jordan
Agricultural Resources Management Project (392-JO)
Mid term Evaluation

Executive Summary

A. Introduction

1. Background. The Agricultural Resources management Project (ARMP) was designed in late 1995, and was the fourth IFAD supported intervention in the Hashemite Kingdom of Jordan. The previous interventions had assisted in promoting the government’s strategies for rainfed agricultural development and the extension of credit to smallholders and women. A Mid-term Evaluation (MTE) of the Income Diversification Project (the third intervention) took place in 1998. The purpose of the present MTE, which is taking place in the fourth year of project implementation, is firstly to assess the achievements of the project so far and the impacts on the target groups, secondly to examine the need for adjustment and/or reorientation of the project design and implementation strategy to address identified constraints, and thirdly to suggest lessons from this experience which might be of relevance for similar projects. The outcome of the MTE will be a set of recommendations/lessons emerging from the implementation experience of the project so far, which can be used to modify the implementation methodology for the remainder of the project life, in order to address the identified constraints. These will be presented in the Agreement at Completion Point (ACP), which will remain as a reference point for future co-operation among the partners. The MTE mission was fielded in September/October 2000.

B. The Implementation Environment

2. The Macro-economic Situation. Jordan has a small open economy with a Gross Domestic Product (GDP) at current prices estimated at JOD 5.3 billion (USD 7.5 billion). The country’s population is currently 4.9 million with an annual growth rate of around 3% (1999 estimates) and per capita income is JOD 1,080 or USD 1,523. The economy is characterized by a dominant service sector (finance, government and other services, transport and communications, tourism and trade) which accounts for 69% of GDP. Jordan has limited natural resources and is highly dependent on imports, particularly oil and food stuffs. The economic prospects for 2000 were rated as encouraging, and the real growth rate is expected to outstrip the predicted population growth rate: annual inflation should be maintained at the present low rate of below 2%. The economy is also expected to benefit from increased remittances from Jordanians working abroad, and higher tourism receipts. Overall, with low inflation, a stable currency and a high level of foreign reserves (sufficient to cover about nine months of imports), Jordan has a very stable macro-economic environment. The country’s major challenges are to resolve the unemployment and poverty problems and continue with the current economic reforms to achieve and maintain a good growth rate, curtail the trade deficit and further reduce foreign debt, particularly commercial borrowings.

3. Poverty and Social initiatives. The government of Jordan (GOJ) has been allocating resources to poverty alleviation efforts for many years, but these were mostly in the form of social welfare programmes. Only recently has the government tried to target its efforts more specifically towards self-help activities and has also recognized the importance of employment creation, especially for the large youth sector. A 1997 study conducted by the Ministry of Planning (MOP) found that 21% of the sample population were under the absolute poverty line and 11% were under the abject poverty line, and that the rural poor were generally the landless, the small farmers, herders and rural women.

---

Footnote:
3 The evaluation has been organised and supervised by Ms M. Bishay, IFAD Senior Evaluation Officer. The mission members appointed by IFAD comprised: Mr F. Butcher, Mission Leader/Institutions Specialist; Mr. B. Godbole, Rural finance Specialist; Mr. D. Lugg, Natural resource Specialist and Mrs M. Hussein, Sociologist/ gender specialist. These were joined by counterpart staff from the Ministry of Agriculture (MOA) in Amman and staff from ACC and accompanied by staff from the Project Management Unit (PMU) of ARMP in the field.
Following these findings GOJ prepared a Social Productivity Programme (SPP), the first three-year phase of which was launched in 1998.

4. **The Agricultural Sector.** Jordan’s natural resources for agricultural production are very limited. Only about 5% of the land mass is considered arable, and Jordan is among the world’s most water-deficit countries. The challenge for the Government is, therefore, to promote sustainable use of natural resources. The contribution of agriculture to Jordan’s GDP, including forestry and fisheries, declined from 6% in 1995 to 4.5% in 1999 due to drought during the period 1997-1999. However, because of strong upstream and downstream linkages, an estimated 28% of the GDP is considered as agriculture-dependent. The sector provides livelihoods for about 20% of the population and employs about 7% of the labour force. Livestock is estimated to contribute about one half of the total agricultural GDP. Following sector reforms, agriculture in Jordan is now virtually free of all controls and restrictions and all direct subsidies have been removed. Credit to agriculture at low interest rates is now the single most important conduit for GOJ subsidies to agriculture.

5. **Agricultural Finance.** The Agricultural Credit Corporation (ACC) is the sole institutional source of formal credit to both individual farmers and members of village cooperative societies. ACC is a government-owned corporation and not a bank: its current activities are confined to providing credit for agricultural production and development and investing in agricultural companies. ACC’s operations are sustainable and its financial interest is protected because of a system of salary deductions from guarantors. Jordan’s financial institutions, including ACC, are at present not geared to servicing small scale producers who, apart from the problem of easy access, often find it difficult to meet credit terms and conditions, particularly relating to collateral requirements⁴. This void is being filled, on a limited scale, by some local and international Non Governmental Organizations (NGOs) who have been successful in operating micro-credit programmes for the benefit of both urban and rural poor⁵.

C. **Project Objectives and Design**

6. **Rationale and Objectives.** The rationale for ARMP is based on supporting rural households in the two Governorates of Karak and Tefila to intensify their agricultural practices by enhancing natural resource management in the designated project areas. This is to be achieved by arresting soil degradation and restoring soil fertility through the sustainable use of land and water resources. In the mid ’90s the project area, lying in the southern highlands, had received proportionally less investment than other areas in the north which had more and easily accessible natural resources. As a result, rural households in Karak in particular, were reportedly the poorest in Jordan. The majority of farms are small and utilize low input techniques to minimize the risks inherent in an area of very uncertain rainfall. Whilst it was concluded that agriculture would remain the mainstay of the local economy, the project design also recognized that complimentary activities should be developed to allow for income diversification and the fuller involvement of all members of the family. The overall objective of the project, within the GOJ strategies for the development of rainfed farming, is to improve the income stability of vulnerable, resource poor farmers by safeguarding and improving the productive potential of their natural resources and enhancing their returns to labour.

7. **Components.** To meet the objectives the project was designed with five components, viz: (i) resource management (56% of total costs); (ii) agricultural development (18%); (iii) institutional strengthening (10%); (iv) women’s development (10%); and (v) co-ordination and management (6%).

---

⁴ The most common forms of loan collateral are guarantees from persons of standing including salary earners, or pre-signed cheques which are encashed if the borrower defaults in repayment of his/her loan instalments.

⁵ Prominent among such NGOs are the Jordanian Hashemite Fund for Human Development (JOHUD), which until 1999 operated under the name of Queen Alia Fund for Social Development, the Noor Al Hussein Foundation (NHF) and the General Federation of Jordanian Women (GFJW), and two international NGOs, viz., CARE International and Near East Foundation (NEF).
8. **Target Groups.** At the time of design the number of rural households living below the poverty line in the project area was estimated at about 7,000. The basic target group definition adopted by the project was farmers with land holdings of less than 50 du (5 ha) in size: for this group the project provides soil and water conservation works (SWC) on a highly subsidized basis to protect a maximum of 25 du (2.5 ha). Above the 25 du maximum, farmers were expected to take loans for SWC from the credit line provided to ACC. Farmers selected for SWC were also automatically included for agricultural development activities, but this was not exclusive and some orchard rehabilitation works were extended to other groups. All women-headed households applying for SWC activities were to be considered eligible.

9. **Implementation Approach.** Responsibility for project implementation was vested in the Ministry of Agriculture (MOA), with the Directorate of Projects (PD) assuming the lead role, but the actual implementation tasks were to be undertaken by the Directorates of Agriculture based in the two Governorates. Provision of credit was the responsibility of ACC, which was to have a separate subsidiary loan agreement for the project. The design called the selection of areas for project interventions based on both technical and poverty criteria. A participatory community approach was to be adopted, working in co-ordination and partnership with organizations already in the field. In order to introduce such an approach, in 1996 Care International received an Extended Cooperation Programme (ECP) grant towards the costs of undertaking community based water conservation schemes in four villages in the project area. The intention was to work with the government agencies to develop an acceptable methodology, which would then be adopted more widely throughout the project area. These schemes were completed in 1998. To further define the socio-economic conditions in the project areas and to help with targeting and later, evaluation, the design called for the Project Management Unit (PMU) to carry out a baseline survey soon after the project start-up.

10. **Project Costs.** The total project cost was estimated at USD 18.6 million, of which the IFAD loan is about USD 12.8 million. The project has a seven-year implementation period, closing on 30 June 2003. At the end of June 2000 overall project disbursement was 51%, the bulk of which was for civil works for soil conservation.

**D. Implementation Progress**

11. The Resource Management component consists of on- and off-farm SWCs, technical assistance and training and the provision of vehicles and equipment. The on-farm activities cover the construction of stone walls and terraces, contour furrowing and the development of cisterns for on-farm irrigation, whilst off-farm activities include wadi bank and flood protection measures, including check dams and gabion structures and the rehabilitation and improvement of springs and their associated water distribution networks. Findings are as follows:

- The project has made good progress in the on-farm soil and water conservation programme, and has provided conservation structures on some 36,000 dunum, or 44% of the appraisal target. Some 2,950 beneficiaries on 1,650 farms have participated in the programme. About 1,170 cisterns have also been completed. Overall, high standards of construction have been enforced. There has been a continuing high demand by farmers for participation in the SWC programme as a whole and for cisterns. However, under-estimation of unit costs at appraisal has resulted in expenditure at the time of the MTE of almost 79% of the allocated base costs for the SWC programme and 64% for cisterns.

- The implementation approach used by the project has been based on individual or family farms rather than on a whole village or watershed basis, as foreseen at appraisal, and also uses simpler land use planning methodology. Discussions with beneficiaries and PMU staff in the field and in

---

6 73% of the number estimated at appraisal.
the stakeholder workshop endorsed the present project approach and highlighted the difficulties which the project would have faced to introduce the more participatory village-based approach described in the design, which under-estimated the complexity of the land holding patterns. However, the minimum farm size criterion used by the project (4 du) for inclusion in the SWC programme is of concern, as this excludes some 20% of farms from participating.

- Following recommendations of the Water Harvesting Division in the Ministry of Irrigation and Water Resources (MIWR), larger water storage structures known as mini-dams and hafirs (off-wadi storage ponds) have been built instead of the smaller check dams described in the design. Eight mini-dams and four hafirs had been completed by 30 June 2000; in practice, these 12 structures have the potential to impound the same volume of water as the total number of check dams that could have been built, at a significantly lower cost per unit of water. This is partly because of under-costing at appraisal.

- ARMP has made good progress with spring rehabilitation, with 43% of the appraisal target for springs and 141% of the appraisal target for canals already achieved. Most spring rehabilitation works appear to be well constructed, but the approach adopted is only partially participatory. The MTE concluded that limited staff numbers and shortage of transportation was affecting this programme. Under present project arrangements, beneficiaries are not expected to make any contributions towards spring rehabilitation or canal lining works in terms of labour or cash. However, they were found to make substantial investments after the rehabilitation in on-farm distribution systems, including drip irrigation equipment, pipes and small storage ponds. Although the appraisal calls for the formation of formal spring user groups, the project has only worked with existing traditional groups.

2. Agricultural Development

12. The Agricultural Development component consists of the establishment and/or rehabilitation of orchards and vineyards, support for the extension service, extension packages, demonstrations for field crop intensification, and training of staff and farmers. The MTE found that:

- Overall, about half of the total appraisal target for new orchard plantings has been achieved with almost 600 beneficiary farmers. At this stage, about a quarter of the area developed under the SWC programme has been planted to fruit trees, primarily olives. Essentially all of the new orchards are on undeveloped land without previous cropping. The project has also subsidized farm fencing, which was not included at appraisal.

- There has been limited uptake of fruit tree rehabilitation (about 17% of the appraisal target), partly due to farmer reluctance to deep prune bearing trees. The MTE concluded that the appraisal target overestimated farmer demand for this activity. A limitation of follow-up to the first year after pruning, is also probably restricting uptake.

- There has been little effective progress and no discernible impact from the intensification of field crop production activities, which involve demonstrations of new varieties and cereal/vetch rotations.

3. Rural Financial Services

13. A distinct Rural Financial Services (RFS) component was not included in the design of ARMP, rather various RFS activities were dispersed over three of the project components. However, all the activities were to be undertaken by ACC, funded through a subsidiary loan agreement. The anomaly in the design was remedied somewhat in the Loan Agreement, which described the project in terms of “parts” rather than components (see description of the project in Schedule 1 of the loan agreement). The RFS activities in total then became one “part”, and are so grouped for allocation and withdrawal of
IFAD loan proceeds. For the purposes of the MTE, RFS activities are grouped and treated the same way as in the loan agreement.

14. The RFS activities comprise a credit line to ACC for on-lending to individual farmers and women or their groups, and assistance for ACC to continue its restructuring and reform programme (which was initiated under the ongoing IFAD-assisted Income Diversification Project). The overall resource allocation for RFS amounts to USD 2.33 million, 80% of which is for incremental credit. About one-third of this is intended for women’s Income Generating Activities (IGAs). Implementation progress is as follows:

- ACC has developed a sound system for the delivery of credit under ARMP with due attention to financial viability and sustainability of its operations. ACC’s loan policies and procedures for its regular credit programme also apply to project lending. However, The MTE found that there were variations in fixing loan amounts and maturity periods.

- **Credit Disbursements.** To date, just over JOD 1 million (USD 1.43 million) of credit has been disbursed, about 76% of the appraisal target. This achievement is due to much greater demand than anticipated for IGA loans from rural women, who use the credit for food processing, goat and sheep breeding and dairy/milk processing. Together these activities account for 86% of the total number of loans and 84% of the total amount disbursed. By comparison, credit disbursements for land consolidation and supplementary SWCs are far below the appraisal estimate and account for just 11% of the amount disbursed. This seems to have arisen because of insufficient knowledge at the design stage of the present land tenure arrangements and the social pressures leading to land fragmentation; credit alone is not an appropriate mechanism to address this problem.

- **Loan Collateral and Maturity Periods.** The ACC policy on collateral requires monthly salary deductions from the salary of the guarantor. Although this has ensured 100% loan repayment, it has some adverse implications. Firstly, the poorer women who are not able to comply with salary deductions do not have access to ACC credit, whilst women borrowers who can offer sufficient salary deductions can obtain larger loans than strictly needed for their IGAs, and can then divert excess funds to household and consumption purposes. Secondly, grace periods, even if justified, are not allowed and since loan repayment periods are not linked to the net cashflow of the IGA financed, the debt burden and interest payments are often much more than necessary.

- **Beneficiary Constraints.** Credit beneficiaries highlighted the two main constraints to loans as firstly, the lag between loan applications and disbursements (up to as long as two to three months, due to the two-level vetting system), and secondly the lack of support to market processed products.

- **ACC Institutional Strengthening.** ACC has been and remains reluctant to borrow funds for institutional strengthening, as these funds have to be repaid by ACC using the same mechanism devised for the credit funds. Only a small allocation of funds earmarked for institutional strengthening has therefore been used, and the use of the substantial balance seems unlikely. Progress with the restructuring of ACC and possible conversion into a rural finance bank has been minimal.

4. Women’s Development Programme

15. The main development resource for women in ARMP is credit. It was envisaged that women’s small enterprises would generate additional household income and provide opportunities for remunerative activities during slack periods in the agricultural calendar. Under the Women’s Programme training and technical assistance for the preparation of feasibility studies is provided, whilst under the Institutional Strengthening component is included the identification of NGOs to support implementation of the programme. Progress has been as follows:
• There has been no identification of government organisations or NGOs to assist with the implementation of women’s activities, as envisaged in project design, although there is both scope and need for the organisation of outreach to poor women and for production and marketing to take place on a collective basis.

• A participatory assessment indicated that many of the problems faced by women with respect to enterprise development, production and marketing, might be minimized or resolved with a group approach.

• Of the women who have taken loans from ACC, only 37% have actually started enterprises. The principal reason given was the inability to sell the produce from the IGAs. The proportion of loans actually utilised for IGAs was found to depend to a large extent on the type of enterprise, previous experience, commitment to the enterprise and household consumption and investment requirements.

• Whilst a WID unit has been established and the five female extension agents are technically qualified, they are not properly trained for the purpose of implementing the programme.

5. Institutional Strengthening and Co-ordination and Management

16. The Institutional Strengthening component consists of support for the Field Directorates of Agriculture (FDA) and to the ACC Branch Offices at Karak and Tafila whilst the Co-ordination and Management component is mostly to support the establishment of a PMU. Progress has been as follows:

• The MTE found that the organisation and management aspects of the project were well developed and that adequate numbers of qualified staff had been recruited by MOA in order to implement the project. The organisation is essentially the same as proposed at appraisal, except that the position of Community Development Officer has been amalgamated with the position of Extension Officer in the PMU. However, the organisational arrangements do not consider the post-project sustainability of the Field Units that have been created and at project closure it appears to have been assumed that the Directorates of Agriculture would continue project activities. The project has obtained all the vehicles and equipment specified at appraisal.

• There is little integration or handover of completed development activities to other Units for routine follow up operations. This may eventually affect such aspects as the final area planted, and hence the flow of benefits.

• Although many staff identified a need for more training, the project has actually undertaken an extensive programme of staff training, and staff field trips have also been organised to Egypt and Tunis.

• The design of ARMP included technical assistance (TA) in specific areas to support staff resources, enhance staff capabilities and to develop final recommendations for design parameters. Project costs included TA in *inter alia* water harvesting, software development and research. The MTE could only find TA had been used for water harvesting (from the International Centre for Agricultural Research in Dry Areas, ICARDA). In addition the project has made no use of the funds included for NGO support, and there has been very little use of the budget for research and studies. These funds were intended as an integral part of the project design, and were, for example, to identify activities to widen the scope of IGAs for women, or for contracting research on improved technology.

• Project Expenditure. PMU records indicate that at the end of June 2000 about 51% of the loan funds had been expended. Counterpart funds have been adequate and are mostly provided in a timely fashion. However, expenditure by component and sub-component activities show significant variations from appraisal estimates, either because of unit cost differences or because activities have
not been adopted as predicted. Experience at the mid-term has led the Project Management to suggest the adjustment of physical targets and to propose a re-allocation of funds, shifting towards the activities which are more in demand by the beneficiaries.

- **Monitoring and Evaluation (M&E).** The M&E unit has developed its own software based on Microsoft Access: no assistance was received in the establishment of this system or the preparation of reporting formats. The MTE was impressed with the breadth and depth of the system that has been developed. The project reports are used as the basis for management decisions, hence form a valuable management information tool. Despite being included and costed in the design, no baseline survey has ever been carried out by the project. As project objectives are described in terms of improving the livelihoods of the beneficiaries, it is unclear exactly how the achievements of the project were to be judged, other than in purely physical or financial terms. Being aware of this problem, a socio-economic survey has recently been undertaken by a team from MOA, but while this provides more information on who has benefited and their preferences, it does not go far into actually assessing the impacts. The project management is aware of this problem and is actively seeking to include impact indicators in its regular reporting. However, the MOA socio-economic study proved an important source of information for the MTE.

6. The Experience with Care

17. An Extended Co-operation Programme (NGO/ECP Grant No. 068) was provided by IFAD to CARE in October 1996, with the objective of demonstrating a participatory approach to rehabilitating and managing spring water resources and developing methodologies that could be replicated in other springs and community activities. The ECP took place in four pilot villages in the project area. The CARE methodology was to work through communities that had local voluntary societies, with community contributions for construction and maintenance organised and managed by the societies under CARE supervision. A counterpart contribution of 12% for the construction works was expected from the community. A water committee was formed in each village, and regular payments were expected to be made by the beneficiaries for operation and maintenance of the rehabilitated system. The selection of springs, recruitment of local counterparts and mobilisation and training of the communities was carried out by CARE. The linkages to ARMP were in the design of the structures by ARMP staff, the participation of CARE in a training course for ARMP staff in PRA techniques, and direct involvement of two PMU staff in this programme.

18. Whilst the spring rehabilitation exercise in the four villages was successful, the CARE approach in its totality could not be used by a government agency (because it involved depositing money in a local development account). Visits by the MTE mission did not reveal any difference in the springs rehabilitated by CARE and those rehabilitated by ARMP. In addition, MOA already had an approach to undertaking spring rehabilitation and it would have required a policy decision for alternative methods to be adopted by project staff, who in any case were not in favour of this approach, as they considered that it would involve a substantial amount of additional work without significantly increased benefits. The MTE concluded that the CARE methodology had not clearly demonstrated its value added for ARMP.

E. Impacts and Sustainability

19. Environmental Impacts. The recent IFAD Country Strategy and Opportunities Paper (COSOP) emphasises the critical situation in Jordan with respect to water availability, pointing out that water resources are presently being exploited at 150% of sustainable yield levels. For water conservation, the project should easily exceed its appraisal target, resulting not only in more water for livestock, but also increased recharge of groundwater. In addition the achievements for soil conservation measures are impressive – for stone walls so far about 70% of appraisal targets have been met. The impacts of soil and water conservation will not become immediately apparent as it take a number of years for the stone walls, in particular, to become effective in reducing soil erosion and water runoff. Nevertheless, as
technical interventions, these conservation structures are virtually permanent (with minimum maintenance).

20. Specifically, in terms of environmental impacts the project is likely to result in reduced soil erosion and increased soil fertility (measured by crop productivity) and increased groundwater recharge. The combined effect of these improvements will result in the increased robustness of the farming systems, and greater water availability for both irrigation and municipal/domestic uses. No negative environmental effects were identified, although there is some concern at the possible concentration of livestock around the mini-dams and the extent of forage which will be available in the rangelands if animal numbers increase significantly.

21. **Production Impacts.** Based on mission estimates and farmer interviews, future yields of newly planted olive trees are expected to average about 437 kg of olives per dunum in a normal year at full production, provided supplementary irrigation is available from cisterns or other water sources. This yield would be expected to provide an incremental return of JOD 250 per dunum. Little impact has been observed as yet from the fruit tree rehabilitation programme, since trees that have been deep pruned will not produce a yield until the fourth year, but future yields are expected to increase by over 50%. This increase would produce an incremental return of about JOD 44 per dunum. The overall impact of the cistern construction is difficult to determine at this stage, although cisterns have a positive impact on the ability of the farmer to plant trees. Cisterns may also be used for domestic water supply. A major impact is the savings on the purchase of water. The MTE could find no impacts from the cereal demonstration programme.

22. **Credit Impacts.** Although impacts of the credit provided so far are limited, the MTE concluded that goat and sheep breeding loans, and to a lesser extent loans for dairy/milk processing, are in general having a positive impact in terms of return to family labour and addition to household income. The impact is marginal in the case of loans for food processing mainly due to marketing problems. There are clear indications of significant improvements in family nutrition with goat/sheep breeding and dairy/milk processing enterprises. The project lending so far has helped generate rural employment, developed entrepreneurial skills among the rural women and enhanced their economic clout and recognition. It was estimated that for the 220 women borrowers who have actually undertaken enterprise development with loans from ACC, the average increase in incomes has been about JD 150 per activity, which represents an increase in annual family income of about 10% to 12%.

23. **Institutional Strengthening.** MOA staff reported that the training received had been very beneficial in assisting with their work activities, but requested for training subjects to be extended. The MTE concluded that the training provided is contributing to enhancing the capacity of MOA generally. By comparison, the institutional strengthening provided to ACC has had almost no effect, simply because the arrangements under which it is to be provided are not considered appropriate, by ACC.

24. **Sustainability.** On balance the MTE concluded that the project interventions would be largely sustainable after project closure. The structures completed by the project require little maintenance and are most probably sustainable in the longer term. This also means that as soil and water conservation is improved, these improvements will also be sustainable. There are some maintenance requirements for the dams and hafirs, but this responsibility has been accepted by MIWR. As benefits increase from the planting or rehabilitation of tree crops, then annual inputs from the farmers should also be more likely to maintain yield levels. Repayments of the credit funds are almost 100% because of the system of guarantors, which means funds will continue to be re-cycled. Present IGAs give relatively low returns; the intervention would become more robust if a greater choice of more profitable enterprises were introduced – such an approach would also increase sustainability.

25. The staff in the PMU are young and have received useful training and work experience. At the end of the project life the PMU will no longer be needed and MOA needs to address the question of the re-
location of the staff, or the continuation of project activities with alternative funding. The new Field Units created in the Directorates could be retained as separate units or absorbed into other FDA activities, on the basis that there will be additional agricultural activity in the Directorates, and continued support post-project will be needed to ensure impacts are optimised.

F. Issues

Issue 1: Re-allocation of Funds

26. The changes proposed by the project management affect the resource management and agricultural development components, in particular. Under these headings some new activities have also been proposed. The changes proposed are justified by the PMU on the basis of the implementation capacity in the project, the expressed farmer demand and the results from the recent socio-economic assessment. Essentially the changes maximise the component activities and rationalise the various cost anomalies.

27. For Resource Management the PMU has proposed, for on-farm SWC: (i) a reduction in the total area of on-farm SWC measures from 82 500 to 75 500 du, plus a greater emphasis on fruit tree planting (see Agricultural Development); (ii) a change in the relative quantity of the different structures, in particular an increase in stone walls, in response to farmer demand; and (iii) an increase in the volume of water stored in cisterns, and the rehabilitation of old cisterns. For off-farm SWC the PMU has proposed: (i) to revise the number of dams to take account of the larger structures and to allow for the hafirs which are being built; (ii) to increase the length of gabions; and (iii) a new farm access road activity.

28. Under the Agricultural Development component the proposals are for: (i) an increase in the area planted so that a greater proportion of lands protected by the SWC activities is planted; (ii) the recognition of the existing activity of farm fencing; (iii) an increase in the length of canals rehabilitated as part of the spring rehabilitation; and (iv) a reduction in the area of orchard rehabilitation to reflect the project experience to date. In calculating the cost implications the PMU has also anticipated savings in other project activities. On balance, therefore, the net incremental cost amounts to JOD 1 064 000 (USD 1.52 million). The MTE estimated that about USD 1 million would be required from loan funds.

29. The MTE endorses the proposals submitted by the PMU. They are based on a full understanding of project realities, farmers’ demands and the constraints faced. In the case of ARMP, the analysis also serves to highlight shortcomings in the design, and it is as well that these are addressed at this point. The revised targets will not change the nature of the project itself (and hence the objectives), but will simply alter and re-balance the targets on a demand-driven basis. The new activities proposed reflect and address the realities of project implementation. If there is a weakness in this request it is that the project management is unable to actually assess the likely changes impacts which will follow the re-allocation, because the M&E does not contain adequate impact indicators. This shortcoming cannot be addressed by the occasional socio-economic survey. The project management is aware of this, and is taking measures to address this in the second half of the project.

Issue 2: Participation in the Project

30. Although the project design describes an overall participatory community-based approach for the implementation of ARMP, in practice there is no systematic approach to community participation and in most cases ARMP and ACC staff are dealing with individuals. Community participation entails costs for both the implementing agency and the beneficiary community. As such, the benefits and value added of a community participation approach have to be clearly demonstrated for each aspect of a programme or activity in which community participation is envisaged. The CARE approach failed in this respect. The Ministry’s strength lies in its technical abilities, and its policies are to improve production and productivity through the adoption of technical innovation, hence unless the additional benefits from participatory approaches are clear, there is little incentive for adopting a different approach to implementation.
31. However, the lack of community participation has led to the beneficiaries viewing the project interventions as passive recipients in some of the project activities such as spring rehabilitation, mini-dams and Hafirs. For MOA overall, a modified approach to include a greater degree of community participation in the second half of the project would provide the opportunity to realize the increased benefits from this approach and would expose staff to a learning process for the benefit of future projects. In its recommendations the MTE proposes that such an approach is included for the second half of the project and describes the mechanisms necessary to do this.

32. The participation of an NGO for social intermediation in some of the collective aspects of the project, such as spring rehabilitation, would be desirable. However, no suitable partners were identified in the field visits and the only real scope for participation of NGOs under ARMP seems to be with NGOs operating marketing programmes for women. For other components, it is concluded that ARMP itself needs to develop an approach to community participation that would add value to its work and enhance the sustainability of its investments. This will require a strategic commitment from the Ministry and the use of the funds available for technical assistance to develop the appropriate skills.

Issue 3: The Approach to Credit

33. Although mitigating poverty is a high priority for GOJ, ACC’s loan terms and conditions are stringent and not appropriate to ARMP’s poverty alleviation objectives. Almost certainly, project credit beneficiaries are not from the poorest groups. There is an urgent need to ensure the coverage of assetless rural women who belong to the most underprivileged groups and who need small loans to finance IGAs. If IFAD’s development assistance strategy in Jordan is to continue support for GOJ’s efforts to improve the social and economic well-being of the rural poor, especially women, then either an alternative window needs to be opened through ACC, with appropriate support to mitigate the increased risks, or another credit channel needs to be tried or developed. In its recommendations the MTE proposes a compromise approach through ACC. Its emphasis is on introducing a simple mechanism, which would be applicable for small loans, with minimum collateral requirements. The mechanism also allows for the protection of ACC’s interests, through reduction of costs and risks of lending to the poor.

G. Recommendations

1. General Recommendations

34. Participation in MOA Development Projects. It is strongly recommended that MOA utilise the remaining three years of project life to develop its own approach to participatory methods for use in its projects. This would involve a number integrated activities, as follows:

- A clear policy statement on participation needs to be made, and operational guidelines and instructions prepared for the implementation of the policy.
- In the case of ARMP, the post of Community Development Officer in the PMU, which was scrapped at the beginning of the project, needs to be reinstated, and four more field officers appointed in the Field Units.
- The participatory approach needs to be integrated into the work plans and work habits of all members of the ARMP team or it will be unlikely to succeed, hence an orientation, training and visits programme needs to be devised for ARMP and MOA headquarters staff in community participation approaches to agricultural development.
- ARMP should make use of its technical assistance budget to employ short-term TA for community participation.
- Once these steps have been undertaken, then the community participation approach (fully described in the main report) should be introduced in the remaining period of project life.
• There is need for careful monitoring of the value added and impact of adopting a community participation approach. The existing monitoring and data collection system should therefore be upgraded to include impact indicators for community participation.

35. **Re-allocation of Funds.** The project funds should be re-allocated along the lines put forward by the project management. However, before a re-allocation is submitted the project should examine the full consequences of the re-allocation on all project interventions, submitting justifications based on estimated relative impact assessments for the quantitative revisions. In addition the increased number of beneficiaries and the flow of benefits should be projected. ARMP should consider asking IFAD to assist with the preparation of this document, and should indicate the increased contributions expected from GOJ and the beneficiaries.

2. **Resource Management**

36. For **On-Farm Soil and Water Conservation** it is recommended that:

• The development of land use plans and on-farm soil and water conservation works should continue to be on an on farm basis rather than village or watershed basis.
• The minimum size criterion of four dunums for participation in the on-farm soil conservation programme should be replaced with a programme to select farmers based on poverty criteria.
• There should be an expanded demonstration and field testing of other water harvesting methods (such as micro-catchments) by NCARTT/Extension system, with the project role including the identification of farmers and assisting in the organisation of field days and training.

37. For **Off-Farm Soil and Water Conservation** it is recommended that:

• Detailed analyses of the number of potential beneficiaries and livestock should be conducted to assist in the selection of sites for mini-dams and hafirs, the estimation of capacity required and to determine benefits from this activity.
• In principle, the size of the dams should be limited to maximum of about 15,000 m³ to allow a larger number of smaller structures to be constructed.

38. For **Spring Rehabilitation** it is recommended that:

• Additional resources, including a field engineer and vehicle, should be provided in each field unit to be responsible for spring rehabilitation and canal lining activities. This would allow for greater concentration of effort on spring rehabilitation, plus greater beneficiary involvement in all the activities.
• The size restriction of two dunums should be lifted to allow staff to work with groups of farmers in spring areas, both for technical reasons (common spraying against pests such as scale insects and olive stem borer) and to increase benefits from spring rehabilitation works.

3. **Agricultural Development**

39. For **Fruit Tree Planting and Rehabilitation** it is recommended that:

• Project extension staff follow-up the maintenance of newly planted fruit trees until the trees start bearing, since optimum yields, and hence the best return on the investment, can only be obtained through correct and timely pruning, fertiliser application and the use of plant protection materials.
• Similarly, follow-up in the years after rehabilitation is also required, since full benefits cannot be achieved without continued fertiliser applications and pest control.

---

8 These four additional staff also provide the extra capacity to implement the community participation proposals.
• There is scope for carrying out demonstrations and field tests of tree crops such as pistachios, particularly in southern parts of Tafila. This activity could be carried out by the NCARTT station at Shoubek under an agreement with the project, using project funds.

40. Intensification of Field Crop Production. Cereal crop demonstrations should be discontinued directly through the project. However, there may be a longer-term impact of the demonstration activity in support of GOJ’s policy to encourage a shift in cropping patterns. Accordingly, it is recommended that NCARTT, which is the MOA agency directly responsible for technology development and transfer, should undertake this activity under an agreement with the project using the funds allocated for this activity.

4. Rural Financial Services

41. For rural financial services the following recommendations are made:
• Eligibility Criteria. To ensure that those from poor households benefit from project support, the PMU should ensure that a uniform family income ceiling is applied throughout the project area to identify credit beneficiaries.
• Loans for Supplementary SWCs. In order to ensure compliance with the project Loan Agreement, ACC should not allow loans for the construction of farmhouses as part of SWC activities.
• Broadening Credit Outreach. To provide women from the most disadvantaged households with access to credit, the project management and ACC should initiate action to develop alternative mechanisms that broaden the credit outreach. The objective should be to demonstrate the effectiveness and sustainability of a micro-credit development model. This would seek to benefit from the strengths of NGOs in understanding the problems of the rural poor as well as compensating ACC for the higher transaction costs and credit risks, and which could, based on experience gained, be replicated in other future projects. A suggested approach is described in detail in the main report.
• Determination of Loan Amounts and Repayment Periods. Loan amounts should be strictly limited to the outlay required for the IGA financed, as the burden of debt service for a higher loan than necessary results in a reduction of the financial impact in terms of increased income for the borrower. In addition, instead of the present standard period of eight years, loan repayment periods should be adjusted to the net cashflow of the activity financed and include, where justified, appropriate grace periods. The implementation of these measures would permit ACC to service a larger number of borrowers with the available loan funds, and this process would be further facilitated due to faster recycling of loan repayments through the Revolving Fund.
• Loan Processing Delays. In order to reduce delays in approving credit applications, the PMU and ACC should, in joint consultation, introduce a system under which all loan applications, after a preliminary scrutiny and certification of eligibility, are directly sent to the ACC branch for appraisal and approval.
• Revolving Fund. ACC should maintain the Revolving Fund in an account to which interest accrues at a positive real rate. This is also of benefit to ACC, as the subsidiary loan agreement provides for ACC’s repayments to be in JOD, at the exchange rate prevailing at the time the funds are repaid.
• ACC Restructuring. The study on ACC restructuring and transformation into a rural finance bank should be expedited. This would, among other things, facilitate introduction of savings-linked micro-credit programmes, which have significant advantages for poor rural clients (e.g. consumption smoothing and saving for loan repayment or unforeseen eventuality).
• Increasing Funds Allocation for the Women’s Programme. Since the demand for loans for land consolidation is very low consideration should be given to the re-allocation of these credit funds to meet increased demand under the women’s credit programme. In addition, further use of substantial funds allocated for institutional strengthening is unlikely, and these might also be used in the credit programme.

5. Women’s Development

42. For the Women’s Development Programme recommendations are as follows:
• **Improved Technical Support.** The appraisal included a range of TA intended to fill the knowledge gaps and refine the project design. This TA should be immediately initiated, covering:

  – a feasibility study to identify suitable income generating activities;
  – NGO support under contract to assist in pre-credit activities for women, including group formation and training;
  – provision of funds to support action-oriented market research to assist women in market their products

• **Production and Marketing centres.** The project needs to address the twin problems faced in establishing and maintaining production standards, and in marketing. The approach recommended is to establish, on a trial basis, district-based production and marketing centres, using funds which would otherwise be unutilised from the women’s programme. These units should be established in districts where an NGO or CBO is willing to undertake the responsibility for implementation with the project supporting initial set-up costs. These centres should also be used for training. Technical assistance should be employed for the development of proper brand names, the standardising product specifications, proper packaging and sales. These centres can be developed to act as consolidation and marketing outlets for village based production units where women form groups to undertake production activities jointly. Group based activities should be encouraged, possibly by the provision of storage and processing equipment.

• **Use of the ACC database.** ACC has developed an excellent computerised database of its loan applicants and keeps good socio-economic data on its borrowers. However, this information is not used for programmatic decision-making or for feedback to ACC or ARMP management. This data should be analysed and used for regular reporting and evaluation of the loan applicants, and used by ACC for improving its loan products and portfolio.

• **Staff Training.** There is a need to provide institutional and technical support to Women in Development (WID) staff through additional training in enterprise development, group formation, communication skills and monitoring and evaluation skills.

6. **Project Management, Co-ordination and Institutional Strengthening**

43. The recommendations for these components are:

• **Technical Assistance and Studies.** Both the scope of the project and the capacity of staff have been restricted by: (i) the reluctance to make use of the technical assistance provided for in the project design; (ii) the non-engagement of outside agencies in areas where the Ministry does not have competence; and (iii) the lack of research and studies where necessary to develop the technology required for the project. This should be corrected in the second half of the project life. The TORs of the Permanent Steering Committee (PSC) should be extended to pay particular regard to these shortcomings.

• **MIWR as an Implementing Agency.** The MIWR should be recognised as one of the implementing agencies for the project, especially concerned with the optimisation of water resource use. The role of MIWR should be defined and MIWR should be represented on both the Regional Agricultural Coordination Committee (RACC) and the PSC.

• **Post-project activities.** MOA needs to address the question of the continuation of project activities post-project, and the role of the additional staff in the SWC Field Units. This should also include the expansion of the routine work programmes of existing Field Units to ensure that benefits and impacts of the development activities undertaken are fully realized.

• **Clarification of Coordination Roles.** The Coordination and Steering Committees both have important, but very distinct roles to play in project implementation. It would be useful if both committees prepared terms of reference for their areas of authority, in order to avoid wasteful and unnecessary frictions arising between them. In general decisions concerning only ARMP should be taken at the Regional level, whilst decisions with implications wider than ARMP should be taken by the PSC.
H. Lessons

44. **Institutional Strengthening.** The institutional strengthening for ACC was poorly conceived and is unlikely to be used. The reason for this lies in the terms and conditions applicable to the repayment of funds from the credit institution to the borrower government; for institutional strengthening these are the same as those for the credit line. For institutional strengthening this is unreasonable and places in jeopardy the attainment of the objective of ensuring a strong presence of the credit agency in the project area, for closer and regular interface with the beneficiaries. In this instance ACC should be released from this penalty, but in a more general sense grant funding should be preferred for institutional strengthening.

45. IFAD is currently supporting four projects implemented through PD in MOA. Although institutional strengthening is funded for ACC and to establish the new Field Units in the four Directorates of Agriculture under ARMP, no support is provided for PD, even though, under the management system in MOA, the Directorate has active roles in all the projects, and has central units to review progress. This task is made more difficult because all the IFAD-supported projects in Jordan use different implementation and monitoring mechanisms. This is a missed opportunity. If the monitoring and MIS systems for these projects had been unified, then a more strategic overview of the development impacts of the portfolio could be established, and monitored by PD. This would also have been of help to the M& E Directorate of MOA, which has to report on the progress of the whole portfolio (plus the other development projects).

46. The lesson is that in articulating IFAD’s approach in the country it is worthwhile to try and identify agencies such as PD, which have a central role to play in the development of the portfolio, and to consider strengthening for such agencies to improve their monitoring role for the whole portfolio.

47. **Credit Institutions and The Poor.** Specific and well-defined interventions to broaden the credit outreach to cover the assetless poor in the target group should have been included in the project design. This would mean sufficient attention to capacity building and participation to motivate and promote self-help and self-reliance through group action and training, and assistance to cover transaction costs and credit risks of the credit network to encourage lending to the poorest in the target group. Standard ACC terms and conditions for loans are not appropriate to underprivileged rural women. It is unrealistic to expect a credit agency such as ACC to choose to develop a specific window for the poor, unless sufficient incentives and risk funds are both included in the project costs, and there is at least the outline of an agreement as to how the arrangements will work. Even then, the commitment of the credit agency may not be assured.

48. **Commitment to Community Participation.** Community participation entails costs for both the implementing agency and the beneficiary community. As such, the benefits and value added of a community participation approach have to be clearly demonstrated for each aspect of a programme or activity in which community participation is envisaged. The ARMP preparatory documents made a broad commitment to a community participation approach but they did not specifically outline the value added of this approach or outline how it would be implemented. Specific procedures have to be laid down for community participation, if it is expected that the approach will be followed in a systematic manner. Furthermore a community participation approach requires policy commitment at the highest level, staff training, beneficiary mobilisation, demonstration and proper monitoring and evaluation.

49. **Impact Measurements facilitate Project Management.** There has to be an internal demand from the project for regular data on outputs and impact of programme activities, in order for it to be valued. The main need for such data is to demonstrate progress towards objectives, which are difficult to measure, such as improved livelihoods, and to facilitate effective project management. In addition, the project objectives should be expressed in a concise and concrete manner so that project staff can be attuned from the beginning to the requirements of monitoring and assessing their achievements. In ARMP monitored data has given a sufficiently clear picture for the project management to be able to recognise
the need to re-direct project activities. However, this re-direction is geared mostly to the project’s implementation capacity, and does not benefit from a good knowledge of the impacts achieved, which would provide justification for such re-direction. It is the combination of physical, financial and impact data into a management information system that allows the project management to take informed decisions and guide implementation towards the agreed targets and objectives. The lesson is that impact data needs to be an integral part of the management process, from the beginning of the project.

50. Reaching Intended Beneficiaries. Farmers in ARMP essentially self-select themselves for participation in the various programmes and there are some aspects of the ARMP selection criteria and methodology which actually exclude the poor. Land holdings are split to take advantage of project SWC activities, and ACC collateral requirements and loan periods result in loans not going to the poorest. The lesson is that the poor and vulnerable households have to be specifically targeted if they are the intended beneficiaries of a programme. The approach to targeting the poor, female headed households and households with a greater reliance on agriculture has to be carefully determined and included in the operating policy and procedures of the project. ARMP is in a strong position to reconcile the twin objectives of poverty alleviation and agriculture growth, but only if the selection criteria are enforced.

51. The Sequence of Project Processing. The approach described in the project design is clearly participatory. It relies on partnership between the implementing agencies and the beneficiary communities. To support this, provision was made to employ assistance in terms of skills, extra capacity and training to fill the gaps in MOA capabilities. The design does not make it clear that this approach represented a major change for MOA. It would have been useful if one of the objectives had been to introduce such an approach. However, the fact is that a participatory approach has not been adopted. A possible contributing factor is that the implementation version of the appraisal was actually prepared after the loan had been signed. Whilst the formulation should properly conceptualise different and possible solutions to address the project goals, the appraisal has to be rigorously practical, fully describing the implementation methodology. The lesson for IFAD is simply that there can be a high price to pay for shortcuts in project processing.
The Hashemite Kingdom of Jordan
Agricultural Resources Management Project (392-JO)
Mid term Evaluation

Main Report

I. INTRODUCTION

1. Background. So far, IFAD has financed six projects in Jordan, with a total cost of USD 147.2 million. Of this total, IFAD loans have amounted to just under USD 60 million, whilst four of the projects are ongoing, and two are closed. This portfolio has been developed to support Government of Jordan (GOJ) development strategies, especially with respect to (i) increasing crop and livestock productivity; (ii) diversifying the incomes of rural families; (iii) creating rural employment and self-employment, and (iv) protecting and conserving natural resources. The Agricultural Resources management Project (ARMP) was designed in late 1995, and is the fourth IFAD supported intervention in Jordan.

2. MTE Objectives. The purpose of the present Mid-Term Evaluation (MTE), which is taking place in the fourth year of project implementation, is firstly, to assess the achievements of the project so far and the impacts on the target groups, secondly, to examine the need for adjustment and/or reorientation of the project design and implementation strategy to address identified constraints, and thirdly to suggest lessons from this experience which might be of relevance for similar projects.

3. The MTE’s field approach consists of a joint examination with all partners (including beneficiaries) of project progress and impacts. The intention is to undertake a learning exercise through which the achievement of project objectives are either assessed and re-stated, or are modified to reflect the project experience and constraints encountered. The outcome may be an agreed revision of project design, where this is deemed necessary, plus a clear statement of the lessons emerging so far, as a guide to further collaboration between IFAD and the borrower. Prior to the mission’s arrival in Jordan a thorough desk review was undertaken by all mission members of documents relating to the project design, supervision reports, project reports, and reports prepared by the technical assistance consultants. Further documentation was also provided to the mission during the course of its fieldwork. The mission held talks in Amman with the Ministry of Agriculture (MOA), the Ministries of Social Development (MOSD), Planning (MOP) and Irrigation and Water Resources (MIWR), the Agricultural Credit Corporation, (ACC), the German Agency for Technical Cooperation (GTZ), Care and other public and private organisations before moving to Karak (the site of the Project Management Unit, PMU) from where a programme of visits to the four Field Directorates of Agriculture (FDAs) concerned with implementation (Qasr, Karak, Mazar and Tefila) and also to the relevant ACC branches, was undertaken. The mission designed a field focused participatory discussion programme for all the visited villages and implemented it with the presence of local agencies involved in the project. At the end of the fieldwork stage the mission held a stakeholder seminar to discuss issues arising with PMU staff and about 30 beneficiary representatives, followed by a briefing to the project’s Regional Agricultural Coordination Committee (RACC). The wrap-up meeting was held in Amman on 12th October, chaired by the Under Secretary of Agriculture. The mission also briefed the Minister of Agriculture on its key findings.

4. The mission wishes to express its particular gratitude for the valuable and unstinting assistance it received from the MOA and project staff, and the staff of the ACC whilst in Jordan, which greatly assisted in undertaking the evaluation.

---

9 The fieldwork of the evaluation took place during the months of September/ October 2000. The evaluation has been organised and supervised by Ms M. Bishay, IFAD Senior Evaluation Officer. The mission members appointed by IFAD comprised: Mr F. Butcher, Mission Leader/Institutions Specialist; Mr. B. Godbole, Rural finance Specialist; Mr. D. Lugg, Natural resource Specialist and Mrs M. Hussein, Sociologist/ gender specialist. These were joined by counterpart staff from the Ministry of Agriculture (MOA) in Amman and staff from ACC and accompanied by staff from the Project Management Unit (PMU) of ARMP in the field.
II. COUNTRY AND SECTORAL CONTEXT

A. Macro-Economic Situation

5. Jordan has a small open economy with a Gross Domestic Product (GDP) at current prices estimated at JOD 5.3 billion (USD 7.5 billion). The country’s population is currently 4.9 million with an annual growth rate of around 3% (1999 estimates) and per capita income is JOD 1 080 or USD 1 523. The economy is characterised by a dominant service sector (finance, government and other services, transport and communications, tourism and trade) which accounts for 69% of GDP. Jordan has limited natural resources and is highly dependent on imports, particularly oil and foodstuffs. The economy has strong links with the neighbouring Gulf countries which constitute its traditional export markets and which provide oil and employment to about one-third of the Jordanian workforce. Foreign aid has been and still is crucial in assisting the country to address its economic and social limitations.

6. Following the decline in world oil prices from the early eighties onwards, which deprived Jordan of much of its traditional export market, GOJ embarked on an economic recovery and restructuring programme in agreement with the International Monetary Fund (IMF), the World Bank, and other bilateral donors. The objective was to stabilise the economy, improve efficiency and broaden the role of the private sector. The programme included reduction in the role of the state in the creation and operation of productive assets, so as to strengthen the market based economic system, a series of fiscal measures to reduce the budget deficit, abolition of exchange controls, trade liberalisation, and improvement of the regulatory environment to promote private sector development. Initial response to these stabilisation and structural reform measures was impressive and the annual growth rate between 1993 and 1995 averaged 5.8%. The annual inflation rate had declined to a mere 2.4% by 1995, and the unemployment rate decreased to 15%. Foreign debt as a ratio of GDP registered a reduction from 190% in 1990 to about 98% in 1995. However, since 1996 the economy has only managed to grow at the modest real rate of between 1-2%, due to unfavourable regional conditions and three severe droughts, which caused a decline in the agricultural sector. The Government is therefore continuing with its structural reform programme, the main elements of which are:

- privatisation or downsizing GOJ’s direct intervention in the economy;
- export promotion by improving the competitiveness and efficiency of Jordanian enterprises mainly through establishment of free zones, entering into free trade agreements and accession to the World Trade Organization (WTO);
- attracting Arab and foreign investments to Jordan;
- promoting tourism;
- management of foreign debt through rescheduling, buy-backs and write-offs; and
- legislative reforms to foster a more efficient and transparent business environment.

7. The economic prospects for 2000 are rated as encouraging, and the real growth rate is expected to outstrip the predicted population growth rate of 2.8%. Annual inflation should be maintained at the present low rate of below 2%. The economy is also expected to benefit from increased remittances from Jordanians working abroad, and higher tourism receipts. Overall, with low inflation, a stable currency and a high level of foreign reserves (sufficient to cover about nine months of imports), Jordan has a very stable macro-economic environment. The country’s major challenges are to resolve the unemployment and poverty problems and continue with the current economic reforms to achieve and maintain a good growth rate, curtail the trade deficit and further reduce foreign debt, particularly commercial borrowings.

B. Poverty and Social Development Initiatives

8. Despite the healthy economy, poverty and unemployment remain pressing problems. The GOJ has been allocating resources to poverty alleviation efforts for many years, but these were mostly in the form of social welfare programmes. Only recently has the government tried to target its efforts more
specifically towards self-help activities and has also recognised the importance of employment creation, especially for the large youth sector. A 1997 study conducted by MOP\(^{10}\) found the following:

- Of the 5853 households sampled, 21% were under the absolute poverty line and 11% were under the abject poverty line;
- The rural poor are generally the landless, the small farmers, herdsmen and rural women;
- Unemployment rates among the absolute and abject poor reached 34% and 38% respectively, as compared to 17% for the sample as a whole;
- Poverty showed a correlation with large family size. Average family size was eight for the abject poor, 7.7 for the absolute poor, compared to 6.1 for the sample as a whole;
- The highest poverty incidence was among the self-employed who were micro- or small scale entrepreneurs and who lacked capital and proper management skills and faced marketing problems due to their products not being competitive in quality and price;
- Direct assistance to the poor provided by formal public institutions, such as the National Aid Fund (NAF) or Zakat Fund, reached only 15% of the absolute poor and 22% of the abject poor. Bureaucracy and red tape of NAF inhibited many of the poor from going through the procedures to obtain NAF assistance which, many of the poor felt, was insufficient to raise them out of poverty;
- Although Balqa followed by Jerash and Karak governorates had the highest concentrations of poverty and Amman governorate had the highest share of absolute poor, poverty was found to be widespread all over the country in urban, rural, refugee camp and ghor\(^{11}\) areas.

9. Following these findings GOJ prepared a Social Productivity Programme (SPP), the first three-year phase of which was launched in 1998. This is estimated to cost JOD 178 million (USD 251 million) and is being supported by the World Bank, along with the Arab Fund for Economic and Social Development (AFESD), the Islamic Development Bank, and other bilateral donors. The main goal of SPP is to improve living conditions and increase the incomes of the poor, in order to lift them above the absolute poverty line. The first phase has the following components:

- Restructuring and expansion of NAF and upgrading the efficiency of its operations and programmes to improve the effectiveness of public cash assistance targeted at the poor;
- Small and micro enterprise development to create effective and sustainable financial and non-financial support services for small and micro entrepreneurs for business start up and/or expansion;
- Establishment of a Training and Employment Fund and a Management Information System in the Jordanian labour market for the purpose of facilitating job placement for the poor and unemployed;
- Community infrastructure development to improve living conditions of poor local communities in the country to be implemented through the Corporation for Housing and Urban Development and the Bank for Urban and Rural Development.

10. A second seven-year phase of SPP has been planned and is expected to be finalised soon, based on the experiences and outcomes of the first phase. The objective would be to work towards institutionalising the structures and mechanisms that are geared to eradicate the root causes of poverty and unemployment. In addition a number of organisations continue to provide small loans to promote local activities; these organisations include government agencies (such as ACC and the Industrial Development Bank) and also a well developed network of “Royal” Foundations and Funds (such as the Nour Al-Hussein Foundation and the Jordanian Hashemite Fund for Human Development).

\(^{10}\) Poverty Alleviation - Policy Measures. The study covered a sample of 5 853 households across 12 Governorates. The absolute (general) and severe (abject) poverty lines adopted for the study were a monthly poverty standard for one household of JOD 27.46 and JOD 20.34 respectively.

\(^{11}\) Ghor- the general area of the Jordan Valley
C. The Agricultural Sector

11. The contribution of agriculture, including forestry and fisheries, to Jordan’s GDP declined from 6% in 1995 to 4.5% in 1999 due to drought during the period 1997-1999. However, because of strong upstream and downstream linkages, an estimated 28% of the GDP is considered as agriculture-dependent. The sector provides livelihoods for about 20% of the population and employs about 7% of the labour force. Livestock is estimated to contribute about one half of the total agricultural GDP.

12. Jordan’s natural resources for agricultural production are very limited. Only about 5% of the land mass is considered arable, and Jordan is among the world’s most water-deficit countries. The challenge for the Government is, therefore, to promote sustainable use of natural resources. Until the early 1990s, GOJ interventions, such as protection of the domestic market by trade restrictions and input and output subsidies (including subsidies for fodder and irrigation water), encouraged farmers to produce crops with little regard to high water consumption and livestock owners to increase the sizes of their herds. Consequently, the country faced chronic and steadily growing water shortages and good pasture land was converted into cultivated land, reducing the feed supply for livestock. In 1993, with the assistance of an Agriculture Sector Adjustment Loan cofinanced by the World Bank (USD 80 million) and KfW (USD 20 million), GOJ, began to implement an agricultural sector reform programme, which has now been completed. The reforms covered:

- elimination of input and procurement subsidies and the repeal of price support for all crops;
- removal of all controls on prices and margins of agricultural produce and elimination of import and export restrictions;
- adoption of a water policy framework, implementation of a programme of volumetric control of groundwater and pricing of irrigation water to prevent wastage through uneconomic and inefficient use; and
- maximizing value added in the agri-business sector.

13. With the implementation of this reform programme agriculture in Jordan is now virtually free of all controls and restrictions and all direct subsidies have been removed. Credit to agriculture at low interest rates is now the single most important conduit for GOJ subsidies to agriculture. As part of the above reform process MOA formulated an Agriculture Policy Charter, which gives the major objectives and guiding principles of GOJ’s policy for the agricultural sector. Key aspects are as follows:

- increase Jordan’s self-reliance in basic foodstuffs;
- manage and conserve available agricultural production resources, especially soil and water, applying the concepts of economic efficiency and comparative advantage, while, at the same time, preserving the environment and ensuring the sustainability of agricultural production over the long term;
- attain social and economic equity between agricultural and other economic sectors, and also within the agricultural sector, and improve the living standards of farmers and agricultural workers;
- orient and synchronise production of agricultural commodities with demand in the domestic, regional and international markets;
- achieve vertical integration of agri-businesses with agricultural production in order to add value to products;
- encourage increased exports of agricultural and livestock products to ensure positive contribution to the national trade balance;
- promote a favourable environment to ensure freely functioning markets and encourage participation of agricultural producers in policy formulation; and
- develop an appropriate legal and institutional framework to provide stability and a favourable investment climate within both the public and private sectors in order to accelerate and strengthen agricultural development.
D. Agricultural Finance

14. Until 1989, the Cooperative Bank (which was a part of the Jordan Cooperative Organization - now the Jordan Cooperative Corporation) provided seasonal and medium-term agricultural loans to members of rural cooperatives. Since then, ACC has been the sole institutional source of formal credit to both individual farmers and members of village level cooperative societies. ACC is a government-owned corporation and not a bank. The Act establishing ACC empowers it to borrow funds to extend all types of loans for agricultural and allied activities as well for marketing, processing and export of agricultural produce. Although the Act also permits ACC to accept deposits and perform other banking functions, its current activities are confined to providing credit for agricultural production and development and investing in agricultural companies. ACC’s annual credit disbursements between 1995 and 1998 amounted to about JOD 20 million, with about 60% of loans being for developmental purposes and the balance being operational loans. Although ACC’s operations are sustainable and its financial interest is protected because of a system of salary deductions, ACC’s loan repayments are not always timely. The repayment rates since 1995 have ranged between 70% and 75%.

15. Jordan’s financial institutions, including ACC, are at present not geared to servicing small scale producers who, apart from the problem of easy access, often find it difficult to meet credit terms and conditions, particularly relating to collateral requirements. This void is being filled, on a limited scale, by some local and international Non-Governmental Organisations (NGOs) who have been successful in operating micro-credit programmes for the benefit of both urban and rural poor. These NGOs work directly with community based organisations (CBOs) and groups and provide them with training and technical assistance, along with loan funds to operate decentralised micro-lending systems. Prominent among such NGOs are the Jordanian Hashemite Fund for Human Development (JOHUD), which until 1999 operated under the name of Queen Alia Fund for Social Development, the Noor Al Hussein Foundation (NHF) and the General Federation of Jordanian Women (GFJW), and two international NGOs, viz., CARE International and Near East Foundation (NEF).

16. Almost all the above micro-credit programmes rely on grant aid from bilateral or international donors, including UN organisations such as the United Nations Development Programme for Women (UNIFEM). Consequently revolving loan funds for village-based community organisations are provided free of cost. Loans from the village level units to individual beneficiaries are at a nominal service charge or a subsidised rate of interest, up to about 3.5%. This has hindered the promotion of savings linked credit schemes. At the moment extension of the coverage of micro-credit to disadvantaged sections is dependent on the availability of grant funds.

E. Major Donor Interventions

17. The United States of America, with a commitment to provide USD 1 billion over the current three-year phase, leads all other bilateral and multilateral donors in providing foreign aid to Jordan. The emphasis is on supporting Jordan’s economic and free market reform efforts. Among the multilateral financial institutions, the World Bank (WB) has agreed to provide Jordan with loan assistance of up to USD 150 million per year for the next three years, and is actively encouraging cofinance from other donors (European Union, US and Japan). WB’s Country Assistance Strategy, which was agreed with GOJ in December 1999, focuses on supporting the current economic reforms (including privatisation and private investment) and water, energy and social projects. In the agricultural sector, WB is currently processing an agricultural exports diversification project, which would help promote exports of high value crops and products, viz., vegetables, fruits and flowers.

18. In addition to the ongoing Income Diversification Project and the ARMP, IFAD is assisting GOJ with the implementation of Phase I of the National Programme for Rangeland Rehabilitation and Development, which is being implemented in five pilot areas. Another project, Yarmouk Agricultural

---

12 The most common forms of loan collateral are guarantees from persons of standing including salary earners, or pre-signed cheques which are encashed if the borrower defaults in repayment of his/her loan instalments.
Resources Development Project, which is cofinanced by AFESD, has been approved and is awaiting effectiveness. IFAD interventions are concentrated in poverty pockets and their main thrust is conservation and sustainable use of land and water resources as well as self-employment and income generation, particularly among disadvantaged rural women.
III. THE PROJECT

A. Project Design

19. This section gives an overview of the project design; further information on each component is given in the relevant sections of implementation progress.

20. **Project Rationale.** The rationale for ARMP is based on supporting rural households in the two Governorates of Karak and Tefila to intensify their agricultural practices by enhancing natural resource management in the designated project areas. In the mid ‘90s the project area, lying in the southern highlands, had received proportionally less investment than other areas in the north which had more and easily accessible natural resources. As a result, at the time of design rural households in Karak in particular, were reportedly the poorest in Jordan. The majority of farms are small and utilise low input techniques to minimize the risks inherent in an area of very uncertain rainfall. The key to increased production was seen as the introduction of improved technology for soil and water conservation and higher value crop and livestock production. In practice, the focus of the project was on crop production, as the area overlaps with the Income Diversification Project, which emphasises livestock production. Whilst it was concluded that agriculture would remain the mainstay of the local economy, the project design also recognised that complimentary activities should be developed to allow for income diversification and the fuller involvement of all members of the family.

21. **Project Objectives and Components.** The overall objective of the project, within the GOJ strategies for the development of rainfed farming, is to improve the income stability of vulnerable, resource poor farmers in the project area by safeguarding and improving the productive potential of their natural resources and enhancing their returns to labour. This is to be achieved by arresting soil degradation and restoring soil fertility through the sustainable use of land and water resources, promoting activities for women through credit and strengthening the capacity of MOA both to implement these measures and to meet the technology needs of farmers. The project interventions are in five components: Resource Management; Agricultural Development; Institution Strengthening; Women’s Development; and Co-ordination and Management. These components as described in the appraisal as summarised in Table 1.

<table>
<thead>
<tr>
<th>Component</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Management (56%)①</td>
<td>– On-farm Soil and Water Conservation works on 8 450 ha; off-farm SWC works for Wadi bank and flood protection including 130 check dams and placement of 2 750 m³ of gabion structures;</td>
</tr>
<tr>
<td></td>
<td>– Rehabilitation and improvements to 105 springs and lining of 8.4 km of main water distribution networks;</td>
</tr>
<tr>
<td></td>
<td>– Credit for on-lending to individuals and groups for supplementary soil and water conservation works, spring rehabilitation and land consolidation;</td>
</tr>
<tr>
<td></td>
<td>– Technical Assistance for beneficiary and community mobilisation, establishment of data base, and development of design criteria;</td>
</tr>
<tr>
<td></td>
<td>– Training of trainers and staff in soil conservation, group formation, community mobilisation, beneficiary participation, and establishment of demonstration sites;</td>
</tr>
<tr>
<td></td>
<td>– Provision of vehicles and equipment for FDAs activities in soil conservation, and provision of recurrent operating costs.</td>
</tr>
<tr>
<td>Agricultural Development (18%)</td>
<td>– Establishment of new orchards and vineyards on 1 875 ha; rehabilitation of 1 125 ha of existing orchards and vineyards;</td>
</tr>
<tr>
<td></td>
<td>– Support for the extension service, extension packages, technical messages and action programmes for field crop intensification;</td>
</tr>
<tr>
<td></td>
<td>– Training of staff and farmers, and establishment of demonstrations on farmer’s fields and improved research-extension linkages;</td>
</tr>
<tr>
<td></td>
<td>– Provision of vehicles and equipment for FDAs activities in extension services; and provision</td>
</tr>
</tbody>
</table>

① Percentage of project costs.
of recurrent operating costs.

| Institution Strengthening (10%) | – Support to FDAs through the provision of salaries, allowances, incentives, staff training programmes for field extension staff, and the provision of capital and recurrent costs of vehicles, field and office equipment;  
| | – Support to ACC Branch Offices at Karak and Tafila through provision of salaries, incentives, allowances, training and technical assistance, as well as the provision of capital and recurrent costs of vehicles, office furnishings and equipment. |

| Women’s Development (10%) | – Feasibility study for identification of suitable small scale income-generating enterprises for rural women in the project area;  
| | – NGO support for promotional campaign, and group formation;  
| | – Training of women in technical matters and small enterprise management;  
| | – Line of credit for financing women’s groups small income-generating enterprises;  
| | – Provision for capital and recurrent costs of vehicles, office equipment and material required for training and demonstrations. |

| Co-ordination and Management (6%) | – Support for the establishment of a PMU at Karak through the provision of staff salaries, allowances, incentives, training programmes, study tours, technical assistance, studies and the capital and recurrent costs of vehicles and equipment;  
| | – Support for establishment of a special sub-committee under the PSC in MOA, Amman. |

Source: Appraisal Report

22. **Target Groups.** At the time of design the estimated number of rural households living below the poverty line in the project area was estimated at about 7,000. The root causes of poverty were identified as: limited access to alternative sources of off-farm income, as influenced by locality and proximity to employment opportunities in urban centres or on other (mainly irrigated) farms; limited opportunities for diversification of farm enterprises due to physical farm circumstances (water/soils/topography); restricted access to the financial resources needed to invest in farming enterprise with higher income generating potential; and a shortage of land in which farmers were willing to make longer-term investment (e.g. sharecroppers and tenant farmers), or a lack of labour for on-going or additional farming operations (e.g. women-headed households).

23. The basic target group definition adopted by the project was therefore farmers with land holdings of less than 50 du (5 ha) in size: for this group the project provides soil and water conservation works (SWC) on a highly subsidised basis to protect a maximum of 25 du (2.5 ha). Above the 25 du maximum, farmers were expected to take loans for SWC from the credit line provided to ACC. Farmers selected for SWC were also automatically included for agricultural development activities, but this was not exclusive and some orchard rehabilitation works were extended to other groups. All women-headed households applying for SWC activities were to be considered eligible: the women’s programme was to be based on applications received, with special attention paid to women-headed households.

24. **Implementation Approach.** The design called the selection of areas for project interventions based on both technical and poverty criteria. The appraisal describes the process envisaged as follows:

- invest in selected physiographic units (hillslope, sub-catchment) which have a concentration of target (poorer) farmers;  
- adopt a demand driven approach to the development of soil and water conservation measures on beneficiaries land;  
- encourage the active and willing participation and contribution of the farmers through developing a modus operandi, in conjunction with other organisations working in the same field, to manage and conserve their own natural resources;  
- stimulate a community approach to resource conservation and management;  
- encourage the consolidation of fragmented land holdings where this is feasible and practical;  
- foster the development of an integrated approach to resource management, whereby physical and biological conservation measures are closely allied to complement each other;
- implement, wherever possible, project activities through local existing institutions which would be strengthened under the programme; and
- concentrate project resources on field implementation, and the expansion of human resource skills at the level of district agricultural directorate.

25. A community approach was to be adopted from the outset, working in co-ordination and partnership with organisations already in the field, to develop an active awareness and mobilisation programme. Starting with a selected number of villages in each district and some progressive farmers, the project strategy was intended to be to promote technical demonstrations and associated educational programmes and site visits to other successful soil conservation projects, to convince target farmers of the profitability and environmental necessity of adopting improved land use and sustainable cultivation systems.

26. **Baseline Survey.** To further define the socio-economic conditions in the project areas (complementing data collected by a RRA survey undertaken in June 1995) and to help with targeting and later, evaluation, the design called for the PMU to carry out a baseline survey soon after the project start-up. The survey was to gather data, which could be, used for selection of the priority areas for project intervention, and as a base to monitor and evaluate project performance. The survey was intended to focus on the identification of poverty pockets and communities with lower economic standing and to identify women farmers in such communities. Specifically, the baseline survey was to investigate: total household income from on-farm and off-farm sources; socio-demographic parameters (household size, gender of head of household, age structure and education levels of household members); type of land tenure, size of land and livestock holdings and number of absentee farmers; cropping patterns and yields, inputs, livestock/crop production, and family versus hired labour, and wages.

27. **Project Costs.** The total project cost was estimated at about USD 18.6 million, of which the IFAD loan is about USD 12.8 million (SDR 8.7 million). The project has a seven-year implementation period, closing on 30 June 2003. At the time of the MTE (21/07/00) the disbursement was 49%, but this masks very high expenditure on civil works for soil conservation.

<table>
<thead>
<tr>
<th>Component</th>
<th>IFAD</th>
<th>GOJ</th>
<th>ACC</th>
<th>Beneficiaries</th>
<th>Total Cost</th>
<th>% Total costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource management</td>
<td>7.51</td>
<td>0.40</td>
<td>0.31</td>
<td>2.14</td>
<td>10.36</td>
<td>55.6</td>
</tr>
<tr>
<td>Agricultural development</td>
<td>2.39</td>
<td>0.28</td>
<td>0.69</td>
<td>3.35</td>
<td>18.0</td>
<td></td>
</tr>
<tr>
<td>Institutional Strengthening</td>
<td>0.99</td>
<td>0.94</td>
<td></td>
<td>1.93</td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td>Womens Development</td>
<td>1.55</td>
<td>0.22</td>
<td>0.16</td>
<td>1.93</td>
<td>10.3</td>
<td></td>
</tr>
<tr>
<td>Coordination and management</td>
<td>0.42</td>
<td>0.64</td>
<td></td>
<td>1.07</td>
<td>5.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12.86</td>
<td>2.48</td>
<td>0.47</td>
<td>2.83</td>
<td>18.64</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Appraisal Report

28. **Implementation Agencies.** Responsibility for project implementation was vested in MOA, with the Directorate of Projects (PD) assuming the lead role. The PD was to establish a PMU to plan and oversee the operations of the project, but the actual implementation tasks were to be undertaken by the Directorates of Agriculture based in the two Governorates. Provision of credit was the responsibility of ACC, which was to have a separate subsidiary loan agreement for the project.

---

14 In accordance with the Loan Agreement signed on January 15, 1996
B. Design Considerations

29. **Community Participation.** At appraisal specific provisions were envisaged for a participatory community-based approach to implementation of ARMP. The implementation process described above for SWC activities cannot be undertaken without community and individual beneficiary participation throughout the various stages. The selection procedures relied on a fine balance between technical and social considerations. In addition a role for NGOs was intended, especially to assist in identification of communities and beneficiaries, group formation and training and the implementation of community based activities, such as construction of flood control structures, spring rehabilitation, and collective income generating activities. However, whilst the procedures to implement these activities are described in some detail in the appraisal, it is unclear whether they were acceptable to MOA. The project interventions proposed are not new, hence the ministry had already established mechanisms for their implementation, which were technically based. It has to be concluded, therefore, that one of the major objectives of the project should have been the introduction of the major innovation of community based participatory approaches to the Ministry.

30. In the appraisal there is no mention of the CARE Extended Cooperation Programme (ECP) arrangement. The intention was to work with government agencies to develop an acceptable methodology, which would then be adopted more widely throughout the project area. However, even being very optimistic, it is unlikely that an activity implemented outside MOA which would only produce results two years after the project had started, could actually be an effective method either of demonstrating or, even more unlikely, convincing the Ministry to adopt participatory approaches. In addition, ARMP is actually quite a difficult project on which to demonstrate such approaches, because participation is not equally applicable in all the components and activities.

31. Overall, this aspect of the design is very weak. In particular there was an underestimation of the practical difficulties to be faced in the field in trying to introduce participatory approaches for some of the major interventions of the project, and a lack of appreciation of the prior need to obtain the wholehearted support of the senior officers in the MOA for the reform of the policies and strategies towards project implementation, before such approaches were attempted.

32. In addition, the GOJ concerns with poverty are expressed directly through social support policies, implemented by the Ministry of Social Services and various NGOs; it is unclear in the design exactly how the MOA actually saw its role in contributing to poverty alleviation.

33. **Targeting.** Despite having objectives concerned with improving the livelihoods of the target groups, the basis for the selection of potential beneficiaries remains very much dependent on technical criteria, especially land holding. Whilst land holding may be a proxy for poverty in many circumstances, it is by no means clear that this is the situation in the project area. Without a clear understanding of land tenure, user rights (including livestock herders), and income sources, this is a somewhat uncertain basis on which to select or exclude beneficiaries. This should either have been corrected with more data before design, or could possibly be incorporated into the base line survey. With hindsight, neither took place. The result has been that at the time of the MTE the socio-economic status of the present beneficiaries is largely unknown. As a previous lesson from earlier designs (repeated in the appraisal) was that there was a need to clearly define the target groups, this is unfortunate to say the least. In addition, the project design included minimum criteria for some interventions (soil conservation, orchard rehabilitation) which might be expected to have the possibility of excluding the poorest groups.

34. **Rural Financial Services (RFS).** The project design does not integrate the provision of credit and other financial services in a single component, but rather scatters the activities under different components. This is particularly difficult as ACC is to be funded through a subsidiary loan agreement, which needs to specify the services to be supplied and the implementation arrangements. It would have been much better from a design point of view if there had been a separate rural financial services component; this anomaly had to be corrected in the loan agreement by pulling together all the “parts” of
the project with which ACC was involved, and these arrangements have been revised for the new Yarmuk Agricultural Development Project.

35. There is an assumption in the design that lack of access to credit alone is the main constraint to land consolidation activities. This seems to have arisen because of insufficient knowledge of the present land tenure arrangements and the social pressures leading to land fragmentation. Credit alone was never an appropriate mechanism to address this problem, which is complex and requires a special investigation reaching much wider than the confines of the project area alone.

36. ACC loan terms were known to be restrictive, especially with respect to collateral for the poorest groups, but no attempts were made either to relax the credit terms, or to suggest different and innovative approaches to reach these groups. The opportunity offered by the design of ARMP could have been taken to persuade ACC to try a pilot initiative, for example group lending or a small loans guarantee fund. Finally, the arrangements under which funds are passed to ACC mean that there is no differentiation between funds for credit and funds for institutional strengthening. This means that ACC has to repay funds for institutional strengthening, and makes them reluctant to undertake such activities: this was known at the time of design.
IV. IMPLEMENTATION PROGRESS

A. Resource Management

1. Design

37. On-Farm Soil and Water Conservation (SWC). The proposed on-farm SWC measures included contour stone walls, contour earth banks (Gradoni terraces), contour guidelines to promote strip cropping, and tree basins: cisterns were also to be established as a water harvesting measure. It was intended that the SWC measures would have simple designs known to farmers and would interfere as little as possible with access and tillage operations. The total number of beneficiary households from the on-farm SWC programme was estimated to be 4,045.

38. Off-Farm Soil and Water Conservation. Off-farm SWC measures proposed were wire gabions for wadi bank protection primarily to protect threatened arable areas from erosion, and check-dams for impounding water for livestock use and for the recharge of groundwater. The check dams were proposed to be constructed across large gullies or wadis draining catchments of 50 to 400 ha in the low rainfall zone (100-200 mm) of the project area, i.e. on government land. The appraisal called for 130 check dams to be constructed across gullies or wadis draining small catchments in the low rainfall zone. These structures were each intended to impound about 5,000 m$^3$ of water primarily for livestock use and for groundwater recharge.

39. In addition, the project proposed to rehabilitate a number of springs and improve their distribution canals. Springs are the major water resource for many villages and provide domestic water, drinking water for animals and supplementary irrigation for crops, particularly perennial tree crops (such as olives, grapes and figs) and vegetables. The springs were to be protected against falling debris and contamination from livestock and other sources, while the main channels would be lined to reduce water losses. It was intended that the beneficiaries would be responsible for construction labour. It was also intended that Spring Water User Groups should be established prior to the commencement of spring rehabilitation work. An allocation was also made available for contracting suitable NGOs for assisting in the implementation of community-based activities including spring rehabilitation.

2. Implementation Progress

40. On-Farm Soil and Water Conservation. The project has made good progress in the on-farm soil and water conservation programme, with 36,000 dunum (44%) of the appraisal target of 82,500 du having been achieved. Some 2,950 beneficiary farmers (73% of the 4,045 farmers estimated at appraisal) on 1,650 farms have participated in the programme. About 1,170 cisterns have also been completed, covering about 70% of the number of farms included in the SWC programme. This number represents about 37% of the targeted number of cisterns. Overall, high standards of construction have been enforced. There has been a continuing high demand by farmers for participation in the SWC programme as a whole and for cisterns. However, substantial under-costing at appraisal has resulted in expenditure of almost 79% of the allocated base costs for the SWC programme and 64% for cisterns.

<table>
<thead>
<tr>
<th>Item</th>
<th>Appraisal Target</th>
<th>Achieved</th>
<th>% Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stone walls $^i$</td>
<td>50 000 du</td>
<td>34 840 du</td>
<td>70%</td>
</tr>
<tr>
<td>Gradoni terraces</td>
<td>13 000 du</td>
<td>120 du</td>
<td>1%</td>
</tr>
<tr>
<td>Contour guidelines</td>
<td>13 000 du</td>
<td>480 du</td>
<td>4%</td>
</tr>
<tr>
<td>Tree basins</td>
<td>6 500 du</td>
<td>560 du</td>
<td>9%</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>82 500 du</td>
<td>36 000 du</td>
<td>44%</td>
</tr>
<tr>
<td>Cisterns $^ii$</td>
<td>200 000 m$^3$</td>
<td>35 180 m$^3$</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: PMU Semi-Annual Report, 30 June 2000

$i/$ Includes stone walls of both 50 cm and 75 cm height;

$ii/$ The appraisal cost tables show 160,000 m$^3$, equivalent to 3,200 cisterns with 50 m$^3$ capacity.
41. The implementation approach used by the project is based on individual or family group farms rather than on a whole village or watershed basis, as foreseen at appraisal, and also uses simpler land use planning methodology. Discussions with beneficiaries and PMU staff in the field and in the stakeholder workshop endorsed the present project approach and highlighted the difficulties which the project would have faced to introduce the more participatory village-based approach described in the design. In practice, the design did not take account of the complex land holding and tenure arrangements found throughout the project area, which result in extreme difficulties in obtaining an agreed and unified approach to area developments across farms. The MTE would support the pragmatic project approach; without this change progress in SWC activities would have been extremely limited. The village-based resource management approach would require much greater staff resources and would substantially limit progress, without providing any significant additional benefits. A similar conclusion has been reached in the recent review of the GTZ-funded Watershed Management Project (WSMP) which was planned to improve watershed management based on a participatory community land use approach in Karak. The review concluded that because of the prevailing conditions of multiple land rights and different interests in the target group the pursuit of a large-scale application of a community based watershed management approach was not a realistic goal.

42. However, the minimum farm size criterion used by the project (four dū) for inclusion in the SWC programme is of concern, as this excludes some 20% of farms from participating.

43. The MTE considers that significant benefits could accrue from linking cistern construction with the soil conservation works and fruit tree planting activity. There is very little yield without supplementary irrigation except in a wet year, and supplementary irrigation is particularly important during the planting and establishment phases of the olive and other fruit trees.

44. **Off-farm Soil and Water Conservation.** Following recommendations of the Water Harvesting Division in MIWR, larger water storage structures known as mini-dams and hafirs (off-wadi storage ponds) have been built instead of the smaller check dams described in the design. Eight mini-dams with an average capacity of 21 760 m$^3$ and four hafirs with an average capacity of over 30 000 m$^3$ had been completed by 30 June 2000. In practice, these 12 structures have the potential capacity to impound the same volume of water as the total number of check dams that could be built, at a significantly lower cost per unit of water. This is partly because substantial under-costing at appraisal meant that the actual number of check dams that could be built is about 57, not 130. Hence, at mid-term this activity has already achieved its target. The dams serve the same primary purpose of providing water for livestock, as well as controlling seasonal flood waters and soil erosion and contributing to groundwater recharge. The use of these structures is consistent with government strategy in that similar structures are found throughout Jordan.

45. Although there is usually little direct beneficiary involvement in the selection of the locations for the structures, all of the mini-dams and hafirs lie close to municipalities or villages and will serve local farmers with livestock, and Bedouin herders. The project does not systematically record the number of beneficiaries or number of livestock which will make use of the water stored, but MTE estimates were that a typical structure would serve some 100-300 beneficiaries with 8-10 000 sheep/goats. There has been little benefit of the dams and hafirs as yet, since all structures have been completed over the last two years, and there has been insufficient rainfall to fill the reservoirs. Nevertheless, beneficiaries interviewed were happy that a water source had been constructed and were looking forward to the benefits, although all had opinions on the siting and size of the reservoir. The MTE observed that livestock access to the hafirs has not always been assured through construction of access ramps.

---

15 The average annual rainfall in Rabba (Karak Governorate) is about 350 mm, while amounts received in 1998 and 1999 were only 69% and 52% of the average, respectively
46. **Spring Rehabilitation.** An Extended Co-operation Programme (NGO/ECP Grant No. 068) was provided by IFAD to CARE in October 1996, with the objective of demonstrating a participatory approach to rehabilitating and managing spring water resources and developing methodologies that could be replicated in other springs and community activities. The ECP took place in four pilot villages in the project area. The CARE methodology was to work through communities that had local voluntary societies, with community contributions for construction and maintenance organised and managed by the societies under CARE supervision. A counterpart contribution of 12% for the construction works was expected from the community. A water committee was formed in each village, and regular payments were expected to be made by the beneficiaries for operation and maintenance of the rehabilitated system. The selection of springs, recruitment of local counterparts and mobilisation and training of the communities was carried out by CARE. The linkages to ARMP were in the design of the structures by ARMP staff, the participation of CARE in a training course for ARMP staff in PRA techniques, and direct involvement of two PMU staff in this programme\(^\text{16}\).

47. ARMP has made good progress with spring rehabilitation; 45 springs (43% of the appraisal target of 105) and 11.8 km of main canal lining (141% of the appraisal target of 8.4 km) have been rehabilitated, with most spring rehabilitation works appearing to be well-constructed. The methodology of planning and implementing the spring rehabilitation programme does include consulting the beneficiaries during the planning and implementation phase, although a more systematic approach to beneficiary involvement would be an advantage. However, each District Field Unit has only one project extension officer responsible for spring rehabilitation (along with their other duties in olive rehabilitation and cereal crop demonstrations), and there are no Field Engineers located in the districts. The MTE concluded that limited staff numbers and shortage of transportation was affecting this programme. Increased beneficiary consultation and involvement, although desirable, would exacerbate this situation. The CARE approach has not been adopted in its entirety, partly because the project staff consider that there would be a substantial amount of additional work without significantly increased benefits.

48. Under present project arrangements, beneficiaries are not expected to make any contributions towards the spring rehabilitation or canal lining works in terms of labour or cash. However, they often make substantial investments after the rehabilitation in on-farm distribution systems, including drip irrigation equipment, pipes and small storage ponds. Although the appraisal calls for the formation of formal spring user groups, the project has only worked with existing traditional groups. Field observations and discussions indicated that all springs had traditional farmers associations with workable systems for distribution and allocation of irrigation water, and all usually collected money from their members for occasional maintenance requirements as and when needed; conflicts were rare. However, these ‘associations’ are not formally registered, and routine water charges are not levied.

### B. Agricultural Development

1. **Design**

49. **Objectives and Goals.** Within the overall project objectives, the goals for the agricultural development component as described in the appraisal report are to: (a) encourage the shift from cereal to tree crop production on suitable land with slopes greater than 8% and average rainfall greater than 200 mm; (b) stimulate closer integration of crop and livestock production within the predominantly mixed farming systems through the increased use of forage legumes in rotation with cereals in areas with more than 250 mm rainfall; and (c) encourage the shift, where feasible, from wheat to barley in the 200 to 250 mm rainfall zone and from barley to green fodder in the lower rainfall zones with less than 200 mm, to arrest degradation of the resource base.

\(^{16}\) Further details of the project are given in the Supervision report of June 1998, in the final report submitted by CARE on August 1998 and in the grant completion report of January 1999.
50. The first goal was intended to be addressed through assistance to resource poor farmers to establish tree crops on land now under cereal/fallow rotation with slopes greater than 8%. This goal assumes that cereal crops are in fact grown on steeply sloping land. However, no analysis of crop production by slope is presented in the appraisal. Field crop production takes place on only about 5.9% and 2.4% of the total land in Karak and Tafila, respectively, and it is the mission’s observation that most of these crops are actually grown on relatively level land in the quite extensive plateau areas. Similarly, most of the tree crops are grown on relatively level land except in some spring areas and on some sloping land where the WFP-funded Highlands Development Project (HDP) has operated. The MTE therefore concluded that the goal stated at appraisal was not valid, and the project has quite sensibly shifted the goal to planting tree crops in conjunction with the project SWC programme (i.e. on land which is presently underdeveloped), which would support the stated government policy of expanding the area planted to tree crops on land with a slope greater than 8%.

51. **Fruit Tree Planting and rehabilitation.** The project design included the provision of seedlings and inputs during the establishment period and extension assistance to support new orchards of olives, grapes, apples, almond, plums and pistachio. The funding would allow for the planting of about 22% of the area (1875 ha) treated with SWC works. It was anticipated that the farmer would contribute about 30% of the cost of planting as labour and other inputs. Fencing was not included as a project input although it was included in the HDP, and is essential to protect trees from livestock. The project was also intended to rehabilitate about 1 125 ha of existing low-yielding tree crops including olives, grapes and plums. Olives comprise 80% of this area. The major activity is deep pruning of trees, coupled with the provision of inputs, mainly fertiliser and plant protection materials. The appraisal report recognised the risk that farmers would have a resistance to deep pruning, and included provisions for extension and training in fruit tree rehabilitation.

52. **Intensification of Field Crop Production.** The proposed approach was primarily the promotion and support of low-cost technologies incorporating the development of forage legumes into cereal rotations and the improvement of green forage fodder production in the marginal barley areas. The major inputs were intended to be the establishment of demonstration trials, farmer training, and training of trainers.

53. **Beneficiaries and Benefits.** Some 4 045 farms were expected to benefit from a combination of all of the above activities in conjunction with the SWC programme. A set of five farm models were developed for these farms, but all assume that cereal crops were planted on the land prior to the construction of SWC measures, and all assume a combination of all of the activities. (In reality, SWC measures have been constructed on undeveloped land, and the various different activities are carried out separately.)

2. Implementation Progress

54. **Fruit Tree Planting.** The PMU has explicitly linked the fruit tree planting activity to the SWC activities, with support for planting provided only to those farmers participating in the SWC programme. Overall, about 50% of the total appraisal target for new orchard plantings has been achieved with almost 600 beneficiary farmers. At this stage, about 26% of the 36 000 du developed

---

17 The WFP-supported HDP has operated in highland areas throughout the country including Karak and Tafila since 1975. The project has supported the development of SWC structures on sloping land, cistern construction, fruit tree planting and associated fencing, and construction of farm stores and access tracks primarily through food-for-work. Overall, in Karak and Tafila, some 2 600 ha of tree crops have been planted and 697 cisterns constructed along with appropriate SWC measures primarily consisting of contour stone walls.


19 It should be noted that the loan agreement differs from the appraisal report by including: a) the rejuvenation of about 1 200 ha of existing tree crops; and b) improvement of existing orchards including pruning back of about 90 ha of olives, 75 ha of grapes and 150 ha of plums, and the intensification of production of about 475 ha through low-cost technical packages including the use of farmyard manure and supplementary irrigation where water is available.
under the SWC programme has been planted to fruit trees, primarily olives, higher than the 22% proposed at appraisal. Essentially all of the new orchards are on undeveloped land without previous cropping. The project has also subsidised fencing, which was not included at appraisal but is essential to protect the planted areas from livestock.

Table 4. Progress in Fruit Tree Planting, Fencing and Rehabilitation

<table>
<thead>
<tr>
<th></th>
<th>Appraisal Target (du)</th>
<th>Achieved (du)</th>
<th>% of Target</th>
<th>Number of Farms</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Planting</td>
<td>18 750</td>
<td>9 226</td>
<td>49</td>
<td>597</td>
</tr>
<tr>
<td>Fencing</td>
<td>--</td>
<td>9 855</td>
<td>--</td>
<td>509</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>11 250</td>
<td>1 962</td>
<td>17</td>
<td>331</td>
</tr>
</tbody>
</table>

Source: Project semi-annual report, PMU, 30 June 2000

55. Fruit Tree Rehabilitation. The methodology of planning and implementing the fruit tree rehabilitation programme is considered generally appropriate, although the minimum size of holding, at two dunum, restricts the project from working in many spring areas, and possibly excludes some of the poorest groups. In particular, common pest problems such as scale insects, olive fruit worm and olive stem borers are better controlled on a group basis when orchards are close together. However, there has been limited uptake of this activity (about 17% of the appraisal target), partly due to farmer reluctance to deep prune bearing trees. The MTE concluded that the appraisal target substantially overestimated farmer demand for this activity. The limitation on follow-up only in the first year after pruning, is also probably restricting uptake, since full benefits of the pruning are not achieved without continued fertiliser applications and pest control.

56. Intensification of Field Crop Production. Demonstrations involving cereal/vetch rotations were established on 743 dunums in the 1997/98 season. No demonstrations were established in 1998/99, partly due to drought conditions at planting. In 1999/2000, demonstrations primarily involved different varieties of wheat and barley using practices recommended by NCARTT. These demonstrations were established on 284 dunums at six sites. However, essentially no yield was obtained due to low rainfall and fields were grazed without harvesting for grain. Training courses have been held in support of this activity, with about 14 courses with an average of 20 participants per course. In conclusion, there has been little effective progress and no discernible impact of this activity. In addition, partly due to the perceived limited impact of the activity and due to time and transportation limitations, the project would appear to place lower priority on the cereal crop demonstrations than the other activities in the project.

C. Rural Financial Services

1. Design

57. A distinct Rural Financial Services (RFS) component was not included in the design of ARMP, rather various RFS activities were dispersed over three of the project components. However, all the activities were to be undertaken by ACC, funded through a subsidiary loan agreement. The anomaly in the design was remedied somewhat in the Loan Agreement, which described the project in terms of “parts” rather than components (see description of the project in Schedule 1 of the loan agreement). The RFS activities in total then became one “part”, and are so grouped for allocation and withdrawal of IFAD loan proceeds. For the purposes of the MTE, RFS activities are treated the same way as in the loan agreement.

58. The rationale for inclusion of RFS interventions in ARMP was based on the consideration that resource-poor farming households in the project area recognised the availability of formal credit at reasonable rates of interest as a critical need to undertake investments with higher income generating potential. The RFS activities comprise:

- A credit line to ACC for on-lending to individual farmers and women or their groups, and
• Assistance for ACC to continue its restructuring and reform programme (which was initiated under the ongoing IFAD-assisted Income Diversification Project), including:
  - the completion of a study on the transformation of ACC into a rural finance bank and computerisation of ACC operations at branch level;
  - training of field officers and staff in general management, financial management, computer skills and to improve loan recovery; and
  - to purchase vehicles for branches in the Project Area.

59. The overall resource allocation for RFS, as estimated at appraisal, amounts to USD 2.33 million, including incremental credit needs (USD 1.87 million), of which 67% is intended for land consolidation and supplementary SWCs, and 33% is for women’s IGAs.

2. Implementation Progress

60. Lending Procedures. ACC has developed a sound system for the delivery of credit under ARMP with due attention to financial viability and sustainability of its operations. Although ACC’s loan policies and procedures for its regular credit programme also apply to project lending, there are, in practice, variations in fixing loan amounts and maturity periods, which, as discussed later, are detrimental to the interests of the target group beneficiaries. Despite a specific provision under the project, the advantages of ensuring NGO participation to enable rural women to combine their resources and experience for collective benefits have not been investigated by the project management.

61. Credit Disbursements. To date, a total of 606 loans have been disbursed under the ARMP, amounting to just over JOD 1 million (USD 1.43 million). The amount disbursed constitutes 76% of the appraisal target (see Table 5 below). This impressive achievement is due to much greater demand than anticipated for IGA loans from rural women. The number of women beneficiaries at 574 already exceeds the appraisal target of 400 by 43.5%, and by project closure this is likely to be over 100%. The main IGAs are food processing, goat and sheep breeding and dairy/milk processing. Together these activities account for 86% of the total number of loans and 84% of the total amount disbursed. By comparison, credit disbursements for land consolidation and supplementary SWCs are far below the appraisal estimate; only JOD 115 000 (USD 161 000) has been disbursed through 32 loans. This accounts for just 11% of the amount disbursed as against the appraisal estimate that 67% of the credit funds would be used to finance these activities.

<table>
<thead>
<tr>
<th>Activity Financed</th>
<th>Appraisal Target USD’000</th>
<th>Achievement at 30 Sept. 2000</th>
<th>% age achievement to Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of Loans</td>
<td>Amount of loans USD’000</td>
<td></td>
</tr>
<tr>
<td>IGAs</td>
<td>621</td>
<td>574</td>
<td>1,271</td>
</tr>
<tr>
<td>Land Consolidation</td>
<td>847</td>
<td>9</td>
<td>54</td>
</tr>
<tr>
<td>Supplementary SWCs</td>
<td>404</td>
<td>23</td>
<td>107</td>
</tr>
<tr>
<td>Total</td>
<td>1,872</td>
<td>606</td>
<td>1,432</td>
</tr>
</tbody>
</table>

Source: ACC

62. The mission found inconsistency in the application of family income criteria while identifying potential beneficiaries, with the ceiling used by Women In Development (WID) extension agents ranging from JOD 1 400 to JOD 1 800. Further, as recommended at appraisal and despite a specific provision, ARMP management did not commission at the project start-up a feasibility study to recommend a range of IGAs suitable to assist rural women to develop small businesses for income generation. Such a study would have broadened the scope of income diversification opportunities and benefited the target group women. The mission was concerned to find that some of the 23 loans for supplementary SWCs have included building farm houses, even though this is not an eligible activity according to the Loan Agreement.
63. **Loan Collateral and Maturity Periods.** The ACC policy on collateral requires monthly salary deductions at the standard rate of JOD 15 per month for a loan of JOD 1,000, usually taken from the salary of the guarantor. Although the ACC policy of insisting on monthly salary deductions has ensured 100% loan repayment, it has some adverse implications. Firstly, the poorer women who are not able to comply with salary deductions do not have access to ACC credit, whilst women borrowers who can offer sufficient salary deductions can obtain larger amounts of loans than strictly needed for their IGAs, and can then divert excess funds to household and consumption purposes. Secondly, grace periods, even if justified, are not allowed and since loan repayment periods are not linked to the net cashflow of the IGA financed, the debt burden and interest payments are often much more than necessary. All loans given by ACC under the project are for a period of eight years and no grace period is allowed; this means the loans and interest are all fully repaid from the guaranteed salary deductions. At appraisal it was expected that ACC would establish individual repayment periods for different packages to adequately reflect the net cashflow pattern of each IGA.

64. **Beneficiary Constraints.** Credit beneficiaries highlighted two main constraints to loans, firstly the lag between loan applications and disbursements (up to as long as two to three months, due to the two-level vetting system), and secondly the lack of support to market processed products.

65. **Revolving Fund.** ACC has established a Revolving Fund to recycle loan repayments for further lending. However, the fund is held by ACC in an account, which does not earn any interest.

66. **ACC Institutional Strengthening.** ACC has been and remains reluctant to borrow funds for institutional strengthening, as these funds have to be repaid by ACC to MOP, using the same mechanism devised for the credit funds. Only a small allocation of funds earmarked for institutional strengthening has been used, and the use of the substantial balance during the rest of the project period seems unlikely. Progress with the restructuring of ACC and possible conversion into a rural finance bank, has been minimal.

### D. Women’s Development Programme

1. **Design**

67. The main development resource for women in ARMP is credit. Under Women Promotion Activities the loan agreement provided for training and technical assistance for the preparation of feasibility studies and marketing, whilst under Institutional Strengthening was included the identification of NGOs to support implementation of the programme. It was envisaged that women’s small enterprises would generate additional household income and provide opportunities for remunerative activities during slack periods in the agricultural calendar. The expansion of the area under perennial crops, mainly fruit, in conjunction with training in small enterprise development, could provide women with opportunities in packaging and processing.

68. **Staffing.** Whilst a WID unit has been established in the extension section of the PMU in Karak and the five female extension agents are technically qualified, they are not properly trained for the purpose of implementing the programme. A participatory assessment with women who have been involved in the credit and enterprise development activities indicated that many of the problems they were facing with respect to enterprise development, production and marketing, could be minimized or resolved with a group approach. In addition, there has been no identification of organisations or NGOs to assist with the implementation of women’s activities, as envisaged in project design, although there is both scope and need for the institutional intermediation of these organisations, especially for outreach to poor women and for organising production and marketing on a collective basis.

69. **Credit Activities.** One of the findings from the socio-economic survey conducted by MOA was that out of the women who had taken loans from ACC under the project, only 37% had actually started enterprises. The principal reason given was the inability to sell the produce from the IGAs. The
proportion of loans utilised by women have depended to a large extent on the type of enterprise, previous experience, commitment to the enterprise and household consumption and investment requirements. There is some concern among ARMP staff that there is need to follow-up the utilisation and progress of the loans more rigorously. At the moment this is the responsibility of ACC alone.

70. **Constraints to IGAs.** In field discussions, women reported that finding proper working areas to undertake both food processing and dairy processing was a problem: kitchens are currently used for processing and storing produce. Many women were hampered by lack of equipment, especially refrigerated storage for dairy products. (Women were reluctant to invest in expensive equipment like refrigerators, as they were unsure of the returns and the short duration of the food and dairy processing season.) Women frequently had a shortage of space for their livestock as well. Fodder has proved to be the principle problem in the last few years and the purchase of feed from the market has forced many women either to sell their entire stock or make sale decisions, which they would not have made otherwise.

E. **Project Management and Coordination**

71. This section covers the two components of Institutional Strengthening and Project Management and Coordination.

1. **Design**

72. **Project Management.** The overall responsibility for project implementation was given to MOA, and specifically allocated to PD, although responsibility for the implementation of rural financial services remains with ACC. A PMU was to be established at Karak and additional Field Units added to the four Directorates of Agriculture in the project area. The PMU was to consist of seven professional officers and support staff. The design called for the project to be implemented in a decentralised manner, with responsibilities for project activities to be placed at district level. Project Coordination was to be affected at the central level by the Permanent Steering Committee (PSC) of MOA, which was established in 1986 and is chaired by the Minister, and at the regional level by a RACC.

73. **Institutional Strengthening.** Under this heading the project provides support for the FDAs in the four project districts and a package of support for ACC. For the FDAs this is to increase the number of operating units to include a SWC section, although in practice this unit covers all project activities. The funding covers salaries and allowances, vehicles and office equipment. The objective of providing institutional support for ACC is to enable the branch offices at Karak and Tafila to enhance the provision of rural financial services in general. Project costs allow for salaries and allowances, vehicles and technical assistance.

74. **Monitoring and Evaluation.** In the design the intention was to use the Project Management Information System (PROMIS) programme to effect the M&E system for ARMP. This programme had been introduced with IDP and was still under development.

2. **Findings**

75. **Project Organization.** The MTE found that the organisation and management aspects of the project were well developed and that adequate numbers of staff (116 at the time of the MTE, with seven staff vacancies\(^{20}\)) had been recruited by MOA in order to implement the project. The staff cadre is well qualified for the tasks required (illustrated in Table 6). The ARMP organisation has three layers of staff, who work in the four Directorates, the PMU and at the MOA headquarters in Amman. The Field

---

\(^{20}\) 3 x Land Use Planners; 1 x assistant M&E officer; 1 x Extension Officer; 1 x Data Entry Clerk; 1 x Draughtsman.
unit in Tafila covers a much greater area than the other Field Units\(^{21}\) and consideration is being given to splitting the unit and establishing a fifth unit. The project has obtained all the vehicles and equipment specified at appraisal. The overall project structure is shown in Figure 1, indicating how the PMU fits into the MOA organisation at headquarters and Governorate levels. The arrangement of the PMU itself is shown in Figure 2, and a typical structure of a Field Unit is shown in Figure 3. The organisation is essentially the same as proposed at appraisal, except that the position of Community Development Officer has been amalgamated with the position of Extension Officer in the PMU. The staff in the Field Units report technically to the Project Manager and administratively to the Directors of Agriculture. Although this has the possibility to cause friction, in practice the MTE found very harmonious and supportive relationships were the norm, with the usual minor problems over the diversion of staff and vehicles.

Table 6: ARMP – Staff Qualifications

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Degree</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>First Degree</td>
<td>33</td>
<td>28</td>
</tr>
<tr>
<td>Diploma</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>High School</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>Secondary School</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>Unqualified</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>116</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: PMU Records

76. However, the organisational arrangements do not consider the post-project sustainability of the Field Units that have been created. The implications in the design of splitting institutional strengthening and project management imply that whilst the PMU has a limited life, the new Field Units would continue after project closure. The argument was that additional capabilities in soil and water conservation were required in the Directorates, although in practice, as mentioned above, the Field Units created for the project actually cater for most project activities, and are not limited to SWC activities. Hence, at project closure it appears to have been assumed that the Directorates of Agriculture would continue project activities. This is not at all clear, and, with very few cost recovery mechanisms in the project, the ability or commitment of GOJ to sustain ARMP activities seems unlikely. In addition, the creation of separate Field Units for SWC activities appears that it may have excluded the existing Field Units from being involved in the project. The MTE was somewhat concerned to find that there was little integration or handover of completed development activities to other Units for routine follow up operations. This may eventually affect such aspects as the final area planted, and hence the flow of benefits. However, project staff have received extensive training (see below) and might be absorbed elsewhere into other MOA projects. This situation does not apply to ACC, where the institutional strengthening provided training and equipment for existing offices.

77. Staff Training. Although many staff identified a need for more training, the project has actually undertaken an extensive programme of staff training, illustrated in Table 7. This programme is appropriate for ARMP, with the possible exception of the accounts staff training in computers, when all accounting remains manual. In addition to the formal training, field trips have also been organised to Egypt (Extension Practices for 24 Extension Agents) and to Tunis (Soil and Water Conservation for ten Officers).

---

\(^{21}\) About 35% of project resources are directed through Tafila.
Table 7: ARMP – Staff Training Programme Undertaken to date

<table>
<thead>
<tr>
<th>Course Name</th>
<th>No. of Courses</th>
<th>Numbers</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Extension</td>
<td>2</td>
<td>30</td>
<td>Extension Officers plus some MOA staff</td>
</tr>
<tr>
<td>Land Use Planning (a)</td>
<td>1</td>
<td>11</td>
<td>Civil Engineers, surveyors</td>
</tr>
<tr>
<td>Land Use Planning (b)</td>
<td>1</td>
<td>11</td>
<td>Civil Engineers, surveyors</td>
</tr>
<tr>
<td>Land Use Planning (c)</td>
<td>1</td>
<td>11</td>
<td>Civil Engineers, surveyors</td>
</tr>
<tr>
<td>Accounting</td>
<td>1</td>
<td>10</td>
<td>Accounts Staff</td>
</tr>
<tr>
<td>TOT (a)</td>
<td>1</td>
<td>11</td>
<td>WID Officers and Extension Agents</td>
</tr>
<tr>
<td>TOT (b)</td>
<td>1</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>TOT - Food Processing</td>
<td>1</td>
<td>12</td>
<td>WID Officers, some MOA staff</td>
</tr>
<tr>
<td>AWPB Preparation</td>
<td>1</td>
<td>30</td>
<td>PMU and FU Staff</td>
</tr>
<tr>
<td>Computer use</td>
<td>2</td>
<td>8</td>
<td>M&amp;E Staff</td>
</tr>
<tr>
<td>Computer Use</td>
<td>3</td>
<td>41</td>
<td>Accounts Staff and Typists</td>
</tr>
<tr>
<td>English Language</td>
<td>3</td>
<td>100</td>
<td>Open to all Staff</td>
</tr>
<tr>
<td>Farm Development</td>
<td>1</td>
<td>30</td>
<td>Extension Agents, land Use Planners</td>
</tr>
<tr>
<td>Surveying</td>
<td>1</td>
<td>10</td>
<td>Surveyors and Planners</td>
</tr>
<tr>
<td>Rapid Rural Appraisals</td>
<td>1</td>
<td>14</td>
<td>Extension Staff</td>
</tr>
</tbody>
</table>

Source: PMU Records

78. Technical Assistance (TA). The design of ARMP allowed for TA to be provided in specific areas to support staff resources, enhance staff capabilities, and to develop final recommendations for design parameters. Project costs included TA in inter alia water harvesting, software development, and research. The MTE could only find TA had been used for water harvesting (from ICARDA). In addition, the project has made no use of the funds included for NGO support, and very little use of the budget for research and studies. These funds were intended as an integral part of the project design, and were, for example, to identify activities to widen the scope of IGAs for women, or for contracting NCARTT to develop improved technology for farmers (scientific information review for extension). It cannot be overstated that without the adequate and appropriate application of these funds, the objectives of ARMP will not be realized. This may help to explain why the more innovative aspects of the project design, which TA, NGO services etc. was designed to support, have not actually been implemented.

79. Project Coordination. The key need for coordination in ARMP is between the project management and ACC, both agencies within the same Ministry. The MTE concluded that whilst working arrangements and formal coordination mechanisms had been established, there was still a distinct lack of integration in the joint striving to achieve project objectives.

80. In the appraisal the functions of the PSC and RACC are described in detail. The PSC, which is chaired by the Minister of Agriculture, draws its members from MOA, MOP, MOF and the private sector. The TORs of the two committees overlap considerably, and the MTE was not surprised to find some tensions between these committees, which seemed to emanate from conflicts in decisions made. Essentially, the PSC should have the wider remit, whilst decisions and guidance which only affect ARMP should be decided by the RACC. There appeared a need for the separate roles to be more clearly defined to avoid conflicts and duplication of effort. In addition, the mission was surprised to find that although ARMP is very concerned with the optimisation of water resources, the relevant Ministry concerned with water resources, (MIWR) is not actually represented on either committee.

81. Project Accounting. The project uses the standard procurement and accounting procedures of the MOA. This means that records are kept manually and that the process of obtaining approvals for expenditures are complex and lengthy. For example, only procurements up to JOD 500 (USD 700) can be decided in the PMU. Other than cash purchases, (which have a very low limit) all expenditures have to be approved through a payments circuit in Amman, involving a number of signatures, which can be both internal and external to MOA. In addition, payment vouchers may be in two parts to indicate recoveries from GOJ or IFAD funds. To expedite this process there is a designated project accountant within MOA in Amman. Cash floats are maintained in the PMU (JOD 500) and in the Field Units.
(JOD 200), these are particularly important for inputs to the women’s programme. To service this system requires a large number of staff and almost continuous chasing of invoices. Reports are required monthly, quarterly and half yearly, whilst auditing takes place through the government’s auditing offices, located in each Governorate.

82. Although cumbersome, the MTE could not actually find examples where the accounting procedures had severely delayed implementation. Unless the MOA accounts are computerised, there seems to be no easy way of improving the accounting procedures.

83. **Annual Work Plans and Budgets (AWPBs).** Project work programmes and budgets are prepared in June for the following (calendar) year. AWPBs have to be submitted to the RACC, the PSC and the MOP. The MTE was pleased to find that this mechanism for project planning and expenditure control was well used, thanks in part to a rigorous reporting procedure (see M&E).

84. **Project Expenditure.** PMU records indicate that at the end of June 2000 about 51% of the loan funds had been expended. Counterpart funds have been adequate and are mostly provided in a timely fashion. However, expenditure by component and sub-component activities show significant variations from appraisal estimates, either because of unit cost differences or because activities have not been adopted as predicted. The reasons for under-achievement are given in the respective sections (SWC, agriculture and rural financial services). Experience at the mid-term has led the Project Management to suggest the adjustment of physical targets and to propose a re-allocation of funds, shifting towards the activities which are more in demand by the beneficiaries. (This is discussed under Re-allocation of Funds.)

85. **Monitoring and Evaluation.** The project did not adopt the PROMIS software, as this was not at a sufficiently advanced stage when ARMP became effective. Instead the M&E unit has developed its own software based on Microsoft Access. No assistance was received in the establishment of this system or the preparation of reporting formats. Data entry clerks have been posted to all the Field Units and project progress is reported in a uniform and detailed fashion. The MTE found that whilst project reports gave good information on physical and financial achievements, they lacked qualitative indicators which would allow assessments of impacts on the beneficiaries. The project reports are, however, used as the basis for management decisions, hence form a valuable management information tool. The MTE was impressed with the breadth and depth of the system that had been developed. Mid-year project records (for the six-month report are in Appendix 1). Once these reports are submitted to PD, they are subject to an in-house review by staff from the Directorate, which has its own M&E unit. The onus of the work of this M&E unit is to ensure compliance with the design and loan documentation. The Ministry has a further M&E Directorate, which looks to provide an overview of progress towards achieving GOJ’s strategic aims in agriculture by assessing progress in the projects being implemented through the MOA.

86. Despite being included and costed in the design, no baseline survey has ever been carried out by the project. Without this, refining of the target group definitions and development of the targeting mechanisms are at best uncertain and the measurement of project impacts is made much more difficult. As project objectives are described in terms of improving the livelihoods of the beneficiaries, it is unclear exactly how the achievements of the project were to be judged, other than in purely physical or financial terms. Being aware of this problem, a socio-economic survey\(^{22}\) has recently been undertaken by a team from MOA, but while this provides more information on who has benefited and their preferences, it does not go far into actually assessing the impacts. However, the study proved an important source of information for the MTE.

\(^{22}\) This was in draft at the time of the MTE. Although originally referred to as an impact study, MOA is aware that the study actually involved a large-scale data collection exercise with very little attempt to isolate project impacts specifically.
Permanent Steering Committee

Projects Department

Regional Agricultural Coordination Committee

Project Management Unit (PMU) Karak

Construction Section
  - Civil Engineer
  - Cartographer
  - Labourers

Land Use Planning
  - Field Unit Head
  - Extension Officers
  - Field Assistants

Extension
  - Community Development Officer

Accounting & Administration
  - Head
  - Accountants
  - Drivers
  - General Staff

Monitoring & Evaluation Officer
  - Head
  - Assistant

Field Units

Figure 2: Project Organization Chart (PMU)
Figure 3. Organization of Field Units

Typical Staff no.

- Head
  - Accountant 1
  - Assistant Accountant/Store 1
  - Head Clerk 1
  - Filing Clerk 2
  - Typist 1
  - Messengers 1
  - Drivers 3

- Extension Agents* 3
  - Land Use Planner 1
  - Data Entry Clerk 1
  - Surveyors 2
  - Surveyors Assistants 2

Total = 10
Total = 9
V. EFFECTS AND IMPACTS

A. Socio-economic Changes

87. Agriculture as a Source of income. The MTE found that there were important socio-economic changes taking place in the project area. The increased access to education has changed the attitudes of the younger generation towards farming; there is an increasing tendency for elders to encourage education of the younger generation and employment outside of agriculture. The share of agriculture in employment has shown a declining trend; from 1997 to 1999 there was a decline of 9%. Farming is also not a full time occupation for most landowners; the recent survey conducted by MOA found that only 30% of the beneficiaries listed their main occupation as farming and that 73% of the beneficiaries obtained less than 25% of their incomes from agriculture. In addition there have also been important changes in livestock production and ownership patterns, as a result of increased production costs in the mid-90s. This has meant that many herdsmen have abandoned animal keeping to find other income sources.

B. Environmental Impacts

88. A major aim of ARMP is to limit environmental degradation by enhancing soil and water conservation. The recent IFAD Country Strategy and Opportunities Paper emphasises the critical situation in Jordan with respect to water availability, pointing out that water resources are presently being exploited at 150% of sustainable yield levels. For water conservation, the project should easily exceed its appraisal target, resulting not only in more water for livestock, but also increased recharge of groundwater. In addition the achievements for stone walls are impressive – so far about 70% of appraisal targets have been met. The impacts of soil and water conservation will not become immediately apparent as it take a number of years for the stone walls, in particular, to become effective in reducing soil erosion and water runoff. Nevertheless, as technical interventions, these conservation structures are virtually permanent (with minimum maintenance) and they will therefore directly help to realize government and project objectives.

89. The question that has been raised, however, is whether the mini-dams perform the same function as intended for the check dams. The MTE found considerable confusion over the purposes of the check dams. This seems to have arisen because by definition check dams are intended as soil conservation structures, but their main purpose as described in the appraisal is water storage for livestock. However, this technology, which was taken from an unimplemented 1990 proposal by the Japan International Cooperation Agency (JICA), has never been tried in Jordan. As described in the appraisal, the check dams, possibly constructed with gabions, would initially have almost no storage capacity, but this could develop as the structures silt up and become effective erosion control measures. However, as this happens the silting reduces the storage capacity significantly, until only a very shallow area of containment is left. This is not desirable in the project circumstances, where evaporation is high to very high.

90. The MTE concluded, therefore, that the check dam design was not clearly the most appropriate technology to achieve project objectives, and that it may have been more appropriate to suggest this technology on a trial basis, providing adequate monitoring was also undertaken. In practice MIWR has used its own accepted designs for the dams and the choice of locations. It is really inconceivable that MOA, through ARMP, would actually question the decisions of its sister Ministry, which has the specialist mandate and responsibility in this area. This situation may have arisen because MIWR is not included as a project implementing agency.

91. In addition, whilst the MTE would question the extent of participation in the selection of sites for mini-dams, at least the requests have been mostly demand driven and the mini-dams constructed so far will be of benefit to existing settled communities.

92. The MTE concluded, therefore, that project management’s decision to accept the MIWR designs in the present locations was justified. For livestock alone, the larger mini-dams, located closer to villages and municipalities, have more advantages. However, a better solution would have been to revise the proposals contained in the appraisal document early on, taking account of changing government policy, the preferences and role of MIWR, and after having consulted the beneficiaries.

93. Finally, check dams were never proposed on land that receives over 200mm of rainfall, which is mostly privately owned. However, when considering “physiographic” units for soil and water conservation planning, check dams may have a role in soil conservation alone in the upper catchments, used in conjunction with stone walls for terracing, gradoni terraces and contour furrows. The MTE would therefore suggest that where circumstances are appropriate, a few check dams should be constructed in areas of private land.

94. Specifically, in terms of environmental impacts the project is likely to result in reduced soil erosion and increased soil fertility (measured by crop productivity) and increased groundwater recharge. The combined effect of these improvements will result in the increased robustness of the farming systems, and greater water availability for both irrigation and municipal/domestic uses. The introduction of perennial crops (promoted under the agricultural development component) would also have a positive affect on soil and water conservation. No negative environmental effects were specifically identified, although there is some concern at the concentration of livestock around the mini-dams and the extent of forage which will be available in the rangelands if animal numbers increase significantly.

C. Agricultural Production Impacts

95. The assumptions made at appraisal appear to be that the major impact of the SWC works would be to shift about 33 to 45% of the cropping pattern from grain crops to new tree crops, to increase grain crop yields by up to 50% when coupled with adoption of improved seed, and in some cases to improve yields of existing tree crops by up to 50% following rehabilitation. Accordingly, the project included planting and rehabilitation of fruit trees and a field crop intensification programme primarily involving demonstrations and farmer training.

96. The MTE considered that the soil and water conservation programme is likely to provide productivity benefits in future, provided that the land is planted. Little impact on cropping patterns is expected other than to increase the area planted to fruit trees since the SWC programme is largely carried out on undeveloped land with slopes greater than 8%, in support of the government policy of expanding the area planted to fruit trees on sloping land. The major impact of the SWC programme so far has been increased land values, with farmers indicating a four or five-fold increase following improvement by SWC measures. So far the SWC programme has reached about 48% of the target number of farms.

Table 8. Number of beneficiaries for on-farm soil and water conservation programme

<table>
<thead>
<tr>
<th></th>
<th>Number of Farms</th>
<th>Beneficiary Farmers</th>
<th>Area (du)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications</td>
<td>1 945</td>
<td>3 300</td>
<td>41 387</td>
</tr>
<tr>
<td>Completed</td>
<td>1 646</td>
<td>2 950</td>
<td>36 019</td>
</tr>
<tr>
<td>In Process</td>
<td>299</td>
<td>350</td>
<td>5 368</td>
</tr>
</tbody>
</table>

Source: PMU Semi-Annual Report, 30 June 2000

25 The term used in the appraisal to denote village scale physical planning units.
97. Based on mission estimates and farmer interviews, future yields of newly planted olive trees are expected to average about 437 kg of olives per dunum (equivalent to about 87 kg of oil) in a normal year at full production, provided supplementary irrigation is available from cisterns or other water sources. This yield would be expected to provide an incremental return of JOD 250 per dunum. Little impact has been observed as yet from the fruit tree rehabilitation programme, since trees that have been deep pruned will not produce a yield until the fourth year. However, the decrease in yield from deep pruning is compensated for by an increase in yield from the trees that have undergone normal pruning plus fertiliser application and plant protection. Based on mission estimates and farmer interviews, future yields are expected to increase from an average of 129 to 202 kg/du of olives, a little over 50%. This increase would produce an incremental return of about JOD 44 per dunum.

98. The overall impact of the cistern construction is also difficult to determine at this stage, although cisterns have a positive impact on the ability of the farmer to plant trees. Cisterns may also be used for domestic water supply. A major impact is the savings on the purchase of water, which can range from JOD 0.4 to JOD 5 per m$^3$ of water.

99. The MTE could find no impacts from the cereal demonstration programme.

D. Credit Effects and Impacts

100. The impacts of the credit provided are limited so far. The reasons for this are:

- the bulk of the lending has taken place in recent years and many of the activities have yet to reach the full development stage;
- because some women can provide salary guarantees to cover more than the loan amounts required by their selected IGAs alone they have taken much larger loans than needed and diverted the excess amount to meet household needs;
- the inability of borrowers to obtain a fair return due to marketing problems; and
- the effects of external factors, such as the severe droughts of 1998 and 1999.

101. However, based on discussions with credit beneficiaries, the project’s extension personnel and ACC staff, the main effects of the loans so far are:

- Goat and sheep breeding loans, and to a lesser extent loans for dairy/milk processing, are in general having a positive impact in terms of return to family labour and addition to household income. The impact is marginal in the case of loans for food processing due mainly to marketing problems;
- Debt service for a larger loan than needed for the IGA, results in erosion of the financial impact;
- There are clear indications of significant improvements in family nutrition with goat/sheep breeding and dairy/milk processing enterprises; and
- The project lending so far has helped generate rural employment, developed entrepreneurial skills among the rural women and enhanced their economic clout and recognition.

102. To try and get an estimate of potential impacts, three Enterprise Development Models were prepared by the MTE on the basis of interviews with women who had actually undertaken IGAs. These showed that returns were between 22% to 29% before financing, and 8% to 15% after financing. (See working paper 3, appendix 4). The project loans have increased women’s access to funds and given them a measure of financial autonomy. The loans have also enabled women to meet household food security needs, finance the education of their children and invest in their assets, particularly the maintenance of houses. It is estimated that for the 220 women borrowers, who have actually undertaken enterprise development with loans from ACC, the average increase in incomes has been about JD 150 per activity. This represents an increase in annual family income of about 10% to 12%.
103. In addition to direct income improvements, loans have given women a measure of financial autonomy, which they have not experienced before. A principal reason for taking loans is to address cash needs at a time when many farm families in the project area are experiencing low income levels as a result of the prevailing drought. The loans provide a measure of financial security, and enable women with very little recourse to other sources of money to meet food security needs, finance the education of their children and invest in other assets, particularly the maintenance of houses. This use of credit for social purposes was never intended, but has demonstrated that there is such a need. Although the loan conditions from ACC are considered very restrictive, the system of calculating loan sizes and the requirement for a salaried guarantor have, for many women (especially those not undertaking IGAs), actually given women more available cash. Hence, ACC loans are meeting an important social function, although not always for the poorest groups.

E. Institutional Strengthening

104. Most MOA staff reported that the training received had been very beneficial in assisting with their work activities, but requested for training subjects to be extended. In particular, MOA staff have little capabilities in social activities, for example the WID staff are entirely trained in technical specializations. The MTE concluded that the training provided under the project is contributing to enhancing the capacity of MOA generally. By comparison, the institutional strengthening provided to ACC has had almost no effect, simply because the arrangements under which is to be provided are not considered appropriate, by ACC.
VI. CONCLUSIONS

A. Summary

105. The MTE concluded that the project is on the right path to arrest land degradation in the designated project area, which has the potential to lead to increased agricultural production. The implementation experience so far revealed that the integrated approach to resource management has not proved feasible, but demand driven soil and water activities have been effectively undertaken. The intended improvements in target group livelihoods, as specifically mentioned in the project objectives, are not yet evident. This is partly due to the present drought and the long gestation period needed for tree crop production. Nevertheless, household incomes have been no doubt boosted by an effective programme of income generating activities (IGAs) directed towards rural women.

B. Resource Management

106. The project has made good progress in the on-farm soil and water conservation programme, with 44% of the appraisal target achieved in terms of land areas. The design approach, based on villages, has not proved practical and the MTE concurs with the change made by the project management to deal with individual farms. The high demand by farmers for participation in the SWC programme as a whole is likely to continue. The impacts of soil and water conservation will not become immediately apparent as it take a number of years for the stone walls, in particular, to become effective in reducing soil erosion and water runoff. Nevertheless, as technical interventions, these conservation structures are virtually permanent (with minimum maintenance) and they will therefore directly help to realize government and project objectives. Specifically, in terms of environmental impacts the project is likely to result in reduced soil erosion and increased soil fertility (measured by crop productivity) and increased groundwater recharge.

107. The project’s off-farm SWC programme has also progressed well and, at mid-term appraisal targets for water storage for livestock have already been achieved. Overall, it is concluded that the mini-dams and hafirs are likely to provide more convenient and cheaper sources of livestock drinking water than presently available, which would sustain large numbers of grazing animals on public land, hence protecting the livelihoods of settled and nomadic livestock farmers in the project area. Estimates are that a typical structure would serve some 100-300 beneficiaries with 8-10 000 sheep/goats. However, the project needs to revise its approach to beneficiary involvement in dam siting and construction.

108. The project has achieved 43% of its spring rehabilitation programme (and 141% of the canal rehabilitation target), with most spring rehabilitation works appearing to be well constructed. Overall, the MTE considered that the project efforts in spring rehabilitation were sustainable and concluded that these activities would increase the amount of water available in the field by about 25-33%, which would ultimately lead to a sustained productivity increases. However, there will be little effect on cropping patterns and little increase in cropped areas since most suitable land is already within the spring command areas.

C. Agricultural Development

109. The project has achieved about 50% of the total appraisal target for new orchard plantings, which the MTE considers very creditable given the recent drought. However, there has been limited uptake of fruit tree rehabilitation (about 17% of the appraisal target), partly due to farmer reluctance to deep prune bearing trees: the MTE concluded that the appraisal target substantially overestimated farmer demand. Essentially all of the new orchards are on undeveloped land without previous cropping, which supports GOJ policy, but is contrary to appraisal assumptions. The project also provides fencing, which was not included in the design. The MTE concurs that this was an omission and is essential to protect the planted areas from livestock. The minimum size of holding in the orchard rehabilitation programme, at two dunum, restricts the project from working in many spring areas, and possibly excludes one of the poorest groups – this criterion needs to be revised.
Based on mission estimates and farmer interviews, the fruit tree planting and rehabilitation programmes are likely to provide useful increases in incomes for the beneficiaries. Estimates are JOD 250 per dunum for new planting and JOD 44 per dunum for rehabilitation. These returns should be adequate to encourage planting and help realize the investment in conservation activities.

D. Rural financial Services

Although not presently geared to service micro-entrepreneurs, ACC is virtually the only formal financial institution in Jordan providing credit to the agricultural sector. It was, therefore, inevitable that it would be assigned the responsibility for implementing ARMP’s RFS activities. ACC has developed a sound system of delivery of credit under ARMP with due attention to sustainability of its operations. The main weakness is that assetless poor and destitute rural women within the target group have no access to credit because of ACC’s stiff collateral conditions and the absence of any specific intervention or mechanism under ARMP to encourage and direct credit to these rural disadvantaged. Also, despite a specific provision under the project, the advantages of ensuring NGO collaboration for this purpose have not been investigated by the project management.

By promoting self-employment and income generation in resource-poor areas of Karak and Tafila, the ARMP credit activities, albeit in limited way, are assisting Jordan to resolve the two major macroeconomic challenges of poverty and unemployment and are also contributing to gender equity. To date, credit disbursements under ARMP constitute 76% of the appraisal target. This impressive achievement is due to much greater demand than anticipated for IGA loans from rural women. By comparison, credit disbursements for land consolidation and supplementary SWCs are far below the appraisal estimate, mainly because the demand for such loans was grossly over-estimated at the design stage.

Although set up by GOJ as a development finance institution for the agricultural sector, with a mandate to service all types of rural producers, the culture within ACC has been conservative with attention to protecting financial interests and avoiding even the normal banking risks. The organisation, therefore, has a very limited poverty focus. This seems to be the main cause of the delay in its transformation into a full-fledged rural development bank. Also, this seems to have contributed to ACC’s reluctance to borrow funds for institutional strengthening.

E. Women’s Development Programme

The focus of the women’s programme on training and credit for agri-based small enterprise development is appropriate. However, the enterprise development aspects of the programme are weak and need to be strengthened. Women are experiencing problems in the production and sale of their produce. By working individually, women incur high costs of production and are not able to take advantage of economies of scale. Individual marketing efforts result in limited outreach. There appears to be considerable potential for assisting women to undertake these activities on a group basis.

At the moment women do not have access to sufficient information or guidance to make informed choices about their investment decisions. Currently women who engage in IGAs for the first time have to pay a heavy price for learning: this is a price that women in the target groups cannot afford to bear. The MTE considered that there is a need, firstly, to greatly expand and detail possible activities for individuals or groups, and secondly to provide project outlines and business plans which would allow informed, rational and viable choices to be made. At the moment the cohesiveness of the overall programme is lacking because of the need for a comprehensive approach which addresses the development process for women in its totality. The gaps are in information, appropriate levels of funding geared to the cashflows of the selected IGAs, marketing assistance and generalised support and encouragement. There is a need for the beneficiaries to become the centre of the development effort, and for the services provided to be focussed on responding to their needs.
F. Beneficiary Profiles

116. There are several factors in the ARMP criteria that have the potential for excluding the poor. This exclusion could happen as a result of the minimum land criteria, the requirement to produce funds up-front for some of the project activities, the submission of original land papers for SWC activities (which the poor are reluctant to do), and the requirement for monthly salary deductions for loans. ARMP has no records of the socio-economic profiles of the beneficiaries. However, using proxy indicators for determining the income status of the beneficiaries, such as educational level, family size and source of employment and comparing these with the results of the recent MOA survey it appears that the beneficiaries of ARMP can generally not be described as the poorest. ACC records some information on the income and land holdings of its borrowers; these figures indicate that in Karak and Tafila, households that have taken loans from ACC have incomes that are 100% and 81% above the GOJ poverty lines for the respective Governorates.

117. Estimates of how poverty and gender are related vary. The Living Conditions Survey of 1996 indicated that there was no significant difference in poverty by gender. However, a study of poverty in the Highlands showed that women headed households are poorer and with less economic assets compared to male-headed households. These figures suggest that unless women are specifically targeted they will not have access to loans. Women reportedly have difficulty obtaining loans from ACC for activities outside the specific women’s programme, primarily due to the lack of land and the required collateral. However, no special effort is made to target female-headed households under the SWC and agricultural development programmes.

G. Project Management

118. The project is mostly equipped and staffed to undertake the implementation of the component activities described in the design, but there are shortfalls in some staff positions and the key position of Community Development Officer has not been filled. The staff have been provided with an extensive programme of training, but the project has failed to make use of the external support which could have come from the use of NGOs, TA and commissioned research and studies. The project has a well-developed reporting process based on a computerised M&E system. This system is replicable within other projects in Jordan, and possibly wider afield, although some additions to address the requirements for more impact data are necessary.

119. The conclusion has to reached that the cancellation of the post of Community Development Officer, the non-commissioning of NGOs for community organisation and the failure to undertake the baseline survey are integrally linked to a reluctance or inability on the part of MOA to implement the project in the participatory way described in the design. The recent socio-economic study undertaken by MOA clearly illustrates the problems faced by the Ministry in attempting to undertake socially-based development, in that it showed that the Ministry neither has the skills nor experience in-house to design, undertake or analyse such a study. Similarly, neither does it have the in-house capacity to undertake ARMP using the participatory approach proposed in the design and incorporated into the loan agreement. The design recognised these difficulties and provided for the Ministry to contract the necessary assistance and to train its staff accordingly. Unfortunately this has not been used.

120. In assessing the project progress towards its objectives to date, an important lesson emerging is that if MOA is to play a full role in the implementation of projects which use socially desirable objectives, such as poverty alleviation, as a measure of achievement, then the technology applied must be allied to an implementation methodology based on participatory principles. At the moment the Ministry gives the impression that it is more comfortable being considered as a technical service. This is a valid standpoint, as a major part of its mandate, expressed in the Agricultural Charter, is to increase

---

26 Poverty Identification Study in the Highland Regions of Jordan. Dr. Ahmad Abu Shaikha and Nadia Takriti.
27 Although women’s names appear in the list of beneficiary farmers under the soil and water conservation programme, these are women whose husbands have transferred land to their names to benefit from this intervention.
production and productivity. Certainly, MOA can point to the impressive results from ARMP in terms of specific national benefits to be derived from soil and water conservation. The difficulty arises, therefore, in that the project objectives, and the IFAD funding, are intended to effect poverty alleviation through the development activities. They are the means to an end, but not the end itself.

H. Institutional Strengthening

121. The institutional strengthening provided by the project has enhanced the capacities of the FDAs, but some doubts remain as to the role of the additional staff after project closure. ACC has only partly utilised the institutional strengthening provided under the project, mainly because of differences over the repayments of funds used for institutional strengthening.

I. Sustainability of Project Interventions

122. On balance the MTE concluded that the project interventions would be largely sustainable after project closure. The structures completed by the project require little maintenance and are most probably sustainable in the longer term. This also means that as soil and water conservation is improved, these improvements will also be sustainable. There are some maintenance requirements for the dams and hafirs as these are likely to silt up, but the responsibility for this task has been accepted by MIWR. As benefits increase from the planting or rehabilitation of tree crops, then annual inputs from the farmers should also be more likely to maintain yield levels.

123. Repayments of the credit funds are almost 100% because of the system of guarantors, which means funds will continue to be re-cycled. MTE recommendations may increase the risk inherent in loans for small IGAs, which could decrease credit funds. To counteract this, recommendations include the moving of the revolving fund so that it attracts interest. Present IGA activities give low returns; the intervention would become more robust if a greater choice of more profitable enterprises were introduced – such an approach would also increase sustainability. Essentially the present borrowers should graduate from the project subsidised credit arrangements and should be replaced by other more needy borrowers. This means that consideration should be given to continuing the women’s training programme after project closure, and maintaining the link with credit.

124. The staff in the PMU are young and have received useful training and work experience. At the end of the project life the PMU will no longer be needed and MOA needs to address the question of the re-location of the staff, or the continuation of project activities with alternative funding. The new Field Units created in the Directorates could be retained as separate units or absorbed into other FDA activities, on the basis that there will be additional agricultural activity in the Directorates, and continued support post-project will be needed to ensure impacts are optimised. This may not apply to the land use planners, and depends for other staff on the willingness and ability of MOA to increase its cadre.
VII. ISSUES

125. This section considers the revisions and alterations that should be adopted for the second half of the project. Three major items are identified: the need for a re-allocation of funds, a methodology to introduce a greater degree of beneficiary participation, and a commitment to target the poor with an appropriate credit window.

A. ISSUE 1: RE-ALLOCATION OF FUNDS

1. Proposals from the Project Management

126. Following three years of implementation experience the project management has expressed the wish to re-allocate funds for the remainder of the project life to reflect the demands on project resources from the beneficiaries and changes in unit costs. In practice there has been heavy demand for some activities and very little demand for others, and some unit costs presented in the appraisal were erroneous from the outset. For a number of other items, the project has been able to show savings in unit costs. The proposed changes affect the resource management and agricultural development components, in particular, as these constitute the largest element of project funding. Under these headings some new activities have also been proposed. The physical changes in targets are shown in Table 9.

Table 9: Revised Targets – Physical

<table>
<thead>
<tr>
<th>Component</th>
<th>Item</th>
<th>Units</th>
<th>Original target</th>
<th>Achieved to mid-2000</th>
<th>Revised Target</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWC</td>
<td>Stone Walls</td>
<td>dunum</td>
<td>50,000</td>
<td>34,500</td>
<td>70,000</td>
<td>+20,000</td>
</tr>
<tr>
<td></td>
<td>Gradoni Terraces</td>
<td></td>
<td>13,000</td>
<td>152</td>
<td>1,000</td>
<td>-12,000</td>
</tr>
<tr>
<td></td>
<td>Contour Guidelines</td>
<td>m</td>
<td>13,000</td>
<td>482</td>
<td>3,000</td>
<td>-10,000</td>
</tr>
<tr>
<td></td>
<td>Tree basins</td>
<td>No.</td>
<td>6500</td>
<td>546</td>
<td>1,500</td>
<td>-5,000</td>
</tr>
<tr>
<td></td>
<td>Cisterns</td>
<td>Cu m</td>
<td>56,000</td>
<td>33,206</td>
<td>66,000</td>
<td>+10,000</td>
</tr>
<tr>
<td></td>
<td>Dams</td>
<td>No.</td>
<td>130</td>
<td>8*</td>
<td>50</td>
<td>-80</td>
</tr>
<tr>
<td></td>
<td>Roads</td>
<td>km</td>
<td></td>
<td>50</td>
<td>+50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gabions</td>
<td>m</td>
<td>2750</td>
<td>3140</td>
<td>5150</td>
<td>+2400</td>
</tr>
<tr>
<td>Ag. Dev</td>
<td>Canal Rehabilitation</td>
<td>m</td>
<td>8400</td>
<td>11,824</td>
<td>26,800</td>
<td>+10,000</td>
</tr>
<tr>
<td></td>
<td>Spring Maintenance</td>
<td>No.</td>
<td>105</td>
<td>45</td>
<td>105</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Tree Planting</td>
<td>du</td>
<td>18,750</td>
<td>8,937</td>
<td>30,000</td>
<td>+11,250</td>
</tr>
<tr>
<td></td>
<td>Fencing**</td>
<td>du</td>
<td>8,826</td>
<td>30,000</td>
<td>+30,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Olive Rehabilitation</td>
<td>du</td>
<td>11,250</td>
<td>1,962</td>
<td>5,000</td>
<td>-6,250</td>
</tr>
</tbody>
</table>

*plus 4 hafirs
**Fencing includes wire and 20,000 m of perimeter stone walls

Resource management

127. For on-farm SWC, the PMU has proposed:

- a reduction in the total area of on-farm SWC measures from 82,500 to 75,500 du, plus a greater emphasis on fruit tree planting (see Agricultural Development);
- a change in the relative quantity of the different structures, in particular an increase in stone walls, in response to farmer demand;
- An increase in the volume of water stored in cisterns, and the rehabilitation of old cisterns;
128. The major change for on-farm SWC is the increase in the area protected of stone walls by 40%. Due to the higher cost of the structures this change would result in an increase of 82% in the cost requirement for SWC measures from JOD 1.76 million to about JOD 3.21 million. The volume of water contained in cisterns would be increased by nearly 20% and in addition the project is proposing to rehabilitate 100 old cisterns; however, the number of cisterns would fall\(^2\). As the unit cost of cistern construction is actually more than three times that used by the appraisal, the total cost would increase by about JOD 300 000.

129. For off-farm SWC the PMU has proposed:

- To revise the number of dams to take account of the larger structures and to allow for the hafirs which are being built;
- To increase the length of gabions;
- A new farm access road activity.

130. The change in dam numbers simply adjusts to the present reality of the construction practices, and allows for the latest unit costs. The effect is to increase the volume of water stored. At the moment some of the areas for which SWC applications are received are inaccessible for at least part of the year because of lack of roads. Access was also identified through the recent socio-economic survey as a major constraint. In the re-allocation an allowance has been included for 50 km of farm access roads, with the costs based on the experience in the Karak Valley Project. The project has a list of approximately 95 km of roads that could be considered, but no detailed studies of viability have been undertaken as yet.

**Agricultural Development**

131. Under this component the proposals are for:

- An increase in the planting area, so that the project target for planting would be increased from 22% of the area protected under the SWC component, to 40%;
- The recognition of the existing activity of farm fencing;
- An increase in the length of canals rehabilitated as part of the spring rehabilitation;
- A reduction in the area of orchard rehabilitation to reflect the project experience to date.

132. The planting target would be upped from 18 750 du at appraisal to 30 000 du. This would require an additional 21 000 du to be planted by the end of the project, however as the actual cost per dunum is about JOD 30, rather than JOD 53.3 given in the appraisal, this change would result in a savings in the allocation for fruit tree planting of about JOD 100 000. At present the project is subsidising wire fencing, as this is a vital pre-requisite to planting, but was omitted from the original design. In the revised proposal, both wire and stone wall fencing are included. This would be allowed for all the planned 30 000 dunums of planting.

133. The overall targets for orchard rehabilitation given in the appraisal were far too optimistic. Based on present rates of implementation and expressions of interest from the beneficiaries, PMU estimates are that under half of the appraisal target can actually be reached by the end of the project.

134. The changes proposed in resource management and agricultural development are justified by the PMU (and have been approved by the RACC) on the basis of the implementation capacity in the project, the expressed farmer demand and the results from the recent socio-economic assessment. Essentially the changes maximise the component activities and rationalise the various cost anomalies.

\(^2\)The result would be a decrease in the number of new cisterns built from the 3 200 proposed at appraisal to 2 240, but an increase over the 1 730 that could actually have been built, due to under-costing.
2. Cost Implications

135. In calculating the cost implications, the PMU has also anticipated savings in other project activities. Based on analysis undertaken to date, and using the figures from the mid-year report of end June 2000, the PMU is predicting under-expenditure on training, consultations and staff allowances. In the case of training the under-expenditure reflects the adjusted programme adopted by the project – essentially for training larger groups and for shorter periods (which is endorsed by the MTE). Staff allowances were included in the project costs, but have been refused by the PSC, as these are not paid on other projects. Consultancies covers the use of external agencies and studies. The overall savings predicted by the PMU under these headings amount to JOD 895 000 (USD 1.28 million).

136. The implications of the proposed changes are for an increase in resource management costs of JOD 2 332 000 and a reduction in the agricultural development costs of JOD 373 000. These estimates are shown in Table 10 and Table 11. On balance, therefore, the net incremental cost of the PMU’s proposals, allowing for the reduction in the other activities, amounts to JOD 1 064 000 (USD 1.52 million). The project management would like to request a re-allocation from unallocated funds (which amount to SDRs 990 000) to partly offset this additional expenditure. The MTE estimated that about USD 1 million would be required from loan funds.

Table 10: Project Cost Changes Required for Resource Management

<table>
<thead>
<tr>
<th>Item</th>
<th>Appraisal Target</th>
<th>Adjusted Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity</td>
<td>Unit Cost (JOD)</td>
</tr>
<tr>
<td><strong>On-Farm</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Existing Items</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stone walls</td>
<td>50 000 du</td>
<td>28.7</td>
</tr>
<tr>
<td>Gradoni terraces</td>
<td>13 000 du</td>
<td>17.4</td>
</tr>
<tr>
<td>Contour guidelines</td>
<td>13 000 du</td>
<td>7.7</td>
</tr>
<tr>
<td>Tree basins</td>
<td>6 500 du</td>
<td>9.3</td>
</tr>
<tr>
<td>Cisterns (m³)</td>
<td>(160 000 )</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>New Items</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cistern rehab.</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td><strong>Sub-Totals</strong></td>
<td>82 500 du</td>
<td></td>
</tr>
<tr>
<td><strong>Off-Farm</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dams and hafirs</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Gabions (metres)</td>
<td>2750</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-Totals</strong></td>
<td>545 900</td>
<td></td>
</tr>
<tr>
<td><strong>Totals, SWC component</strong></td>
<td></td>
<td>3 407 650</td>
</tr>
</tbody>
</table>

Source: PMU

Table 11: Project Cost Changes Required in Agricultural Development

<table>
<thead>
<tr>
<th>Item</th>
<th>Appraisal</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area (du)</td>
<td>Unit Cost (JOD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>New Planting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planting</td>
<td>18 750</td>
<td>53.3</td>
</tr>
<tr>
<td>Fencing</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>18 750</td>
<td>53.3</td>
</tr>
<tr>
<td><strong>Rehabilitation</strong></td>
<td>11 250</td>
<td>38.6</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: PMU
137. In addition the MTE will recommend a change in the proportion of loans given for women’s IGAs, affecting the subsidiary loan agreement with ACC.

3. MTE Assessment of Proposals

138. The MTE was very impressed at the proposals submitted by the PMU. They clearly demonstrate ownership of the project activities, and decisive management. This has come about because of the well-developed M&E system, which provides project management with detailed information on which to make informed decisions. In the case of ARMP, the analysis also serves to highlight shortcomings in the design, and it is as well that these are addressed at this point. The revised targets will not change the nature of the project itself (and hence the objectives), but will simply increase and re-balance the targets on a demand-driven basis. The new activities proposed reflect and resolve the realities of project implementation. In detail the MTE concludes that:

- The reduction in on-farm SWC measures from 82 500 to 75 500 du, coupled with the greater emphasis on fruit tree planting, is considered appropriate, although this reduction results in an increased cost requirement for SWC measures of 82%.

- A greater emphasis on stone walls, with less emphasis on other structures, is supported by the MTE, based on the demonstrated farmer demand, although the full range of structures should still be made available to farmers as required. Accordingly, the proposed shift among the different types of structures is considered appropriate.

- The proposed 30% increase in the number of cisterns from 1 730 to 2 240 should be approved since there is high demonstrated demand from farmers and there are substantial potential benefits in providing supplementary irrigation especially during the planting and establishment phase of fruit trees. Consideration should also be given to widening the cistern activity to include farmers that already have fruit trees and meet poverty criteria, who are not presently included in the soil conservation programme, including farmers who have participated in previous programmes. The overall target should be reviewed again towards the end of the project to determine if it could be increased further.

- The proposed increase in planting area will be beneficial and would significantly increase the flow of project benefits. The figure suggested is reasonable and could be accomplished over the next three years provided that rainfall levels are more normal. The target should be reviewed again towards the end of the project to determine if it could be increased still further.

- The project should continue to focus on olive rehabilitation since the incremental net returns are satisfactory. However, it is important that the appraisal target should be lowered to a more reasonable target, since farmer demand is much less than expected at appraisal. The PMU has proposed to lower the target from 11 250 du to 5 000 du which would result in a savings of some JOD 273 000, this is considered appropriate.

- The introduction of a budget headings for fencing rationalises the present situation. This item should not have been omitted in the design, as planting cannot take place unless the areas are fenced. At the moment the project partly supports fencing costs, and these form a major part of the beneficiary contribution to the overall farm development. This practice, which is now established, should be continued.

- The MTE is sympathetic to the request for farm access roads, but does not consider that the project has fully justified their inclusion. Before they can be included the criteria for selection and construction should be developed, and the format of separate viability studies agreed. It would be acceptable if a budget was allowed as part of the funds re-allocation, but not tied to specific roads.
The MTE agrees with the savings predictions under the funds allocated for the training and allowances. However, as part of its wider recommendations the MTE considers that there is an urgent need to ensure that the project activities can be broadened and strengthened in areas where MOA does not have adequate skills or capacity. This requires that the consultations budget is largely left unaltered.

139. Overall, the MTE supports the revisions proposed, but would comment that:

- more justification is required of how the quantitative aspects of the changes were derived;
- there is a need to revise the project costs tables to show the phasing of the revisions;
- the flow of project benefits need to be reconsidered, as the changes proposed should significantly alter both beneficiary numbers and project outputs.

B. ISSUE 2: PARTICIPATION IN THE PROJECT

1. The Present Situation

140. Participation in the design. The project design describes a participatory community-based approach to implementation of ARMP. This was to include the village-based development of SWC activities, and group formation and training and the establishment of contacts with suitable NGOs for assisting in the implementation of community based activities, such as construction of flood control structures, spring rehabilitation, and collective income generating activities. However, support for adopting a community participation (CP) approach, as envisaged at appraisal and in the loan agreement, has not materialised. The position of Community Development Officer in the PMU, which was included in the project organisation and costs, was subsumed into the position of Extension Officer. NGOs have neither been identified nor recruited for implementing community based or pre-credit activities for women and ARMP staff have not been trained in participatory approaches. Hence, community participation has not been adopted as an integral part of identification, appraisal or implementation of project activities. Each component of ARMP is being implemented using a different methodology, and none have developed a systematic approach to community participation. In most cases ARMP staff are dealing with individual farmers.

141. The CARE experience. The use of CARE to demonstrate an approach to community development (described previously under Agricultural Development) was not successful in that no aspects of the approach were subsequently adopted by the project. The reasons for this are complex. Whilst the spring rehabilitation exercise in the four villages was very successful, the CARE approach in its totality could probably not be used by a government agency (because it involved depositing money in a local development account). However, the approach, in a modified version has been adopted by MOSD and (according to CARE) has been extended elsewhere. The need, therefore, was for the project to consider what useful lessons could be transferred from the CARE experience; this should have been relatively easy as some of the PMU staff worked with the NGO. There is no evidence of this.

142. Given the lack of progress on other aspects of community participation, as described above, it can only be concluded that MOA determined to ignore a community participation approach in implementing ARMP. The Ministry would have some justification in doing this, as it has no experience in such an approach and has established technical mechanisms for implementing the activities included in the project design. The Ministry’s strength lies in its technical abilities, and its policies are to improve production and productivity through the adoption of technical innovation. This is fine, except that the project’s stated objectives are mostly defined in terms of poverty alleviation and livelihood improvements, and there is a clear community participation approach in the design. The lack of community participation has led to the community viewing the project interventions as passive recipients in some of the project activities such as spring rehabilitation, mini-dams and Hafirs.
143. **Individual Approaches.** The soil and water conservation and olive rehabilitation activities are being implemented on individual farms through a household based approach. The olive rehabilitation requires intensive discussions with farmers to convince them to participate in the programme. The credit programme is also undertaken on an individual basis; there has been no attempt to organise the women into groups for achieving either economies of scale in production or marketing. By comparison, the spring rehabilitation programme is undertaken with some participation from the communities, which identify the traditional water channels and ensure that the rehabilitation does not disturb the prescribed or existing water rights. The consultation with farmers about spring rehabilitation (and dam and hafir construction) is often considered a substitute for a more broad-based and systematic approach to community participation by ARMP staff. However, there is no record of the process of community participation followed in the spring rehabilitation programme.

144. The location of mini-dams and hafirs is decided primarily on the basis of technical surveys, no systematic social surveys are conducted to determine current migration patterns, number of potential beneficiaries and livestock ownership. Admittedly, it is difficult to locate people with a transhumant lifestyle, however, no attempt has been made to discuss the investment with the potential beneficiaries in settled villages or the Bedouins located in proximity to the mini-dams and hafirs. Without social surveys it is difficult to assess if these structures can meet all the needs of the intended beneficiaries, whether they wish to contribute to the operation and management of these structures and the numbers of people and animals involved.

145. **Beneficiary Contributions.** Farmers contribute some part of the cost of the soil and water conservation, olive rehabilitation and spring rehabilitation programmes. No contribution is paid by potential beneficiaries for the dams and hafirs that are being constructed, however, as these are on public land it is difficult to envisage a community contribution for their construction. There is a history of collaboration among the villagers regarding the common infrastructure in villages. Most investments in traditional irrigation and water storage systems have been undertaken on a collective basis. The maintenance of many springs and traditional cisterns is still undertaken by collective action with each family contributing according to their water share. Dialogue with potential and actual beneficiaries indicated that community members were keen to participate in collective action. The CARE experience shows that when a clear message is sent to the community that it is expected to make some contribution to the development of common resources, then the beneficiaries make contributions.

146. **The NGO Community.** There are several types of NGOs operating in Jordan. These include foreign NGOs, the local Royal NGOs, Societies and Co-operatives. Together these organisations are estimated to number about 1000. Most of these NGOs are oriented towards social welfare, rather than long-term development, and their outreach is limited to the neighbourhood or village. Current donors and NGOs have relied on existing Societies and/or Co-operatives to foster local community participation, rather than becoming involved with the task themselves. However, the village based societies and co-operatives have very limited capacity for the implementation of donor activities for agricultural development or resource management, and by definition activities have to be limited to the villages in which the societies operate.

2. **The Way Forward**

147. Although ARMP staff do consult communities, this is not done in a systematic manner, and no records are maintained of their outreach to communities for scheme selection and design, or even for the number of beneficiaries involved. Under the soil and water conservation, agricultural development and olive rehabilitation programmes, community participation would help to disseminate information more widely and would assist with proper identification of intended beneficiaries. Under the mini-dams, hafirs and spring rehabilitation components, community participation would ensure that scheme location and design reflect the needs of the beneficiaries, would help to mobilise community resources and would contribute to scheme sustainability. Community participation in the women’s programmes would help to manage the enterprises on a more professional basis and create opportunities for
economies of scale in production and marketing. For MOA overall, a revised approach to include a greater degree of community participation in the second half of the project would provide the opportunity to assess the increased benefits from this approach and would expose staff to a learning process for the benefit of future projects.

148. If an increased element of community participation is to be introduced there is need for re-orientation of the project implementation methodology in some activities. There is also a need to identify the steps and operating procedures for community mobilisation. Unless this is done community participation will not be undertaken in any systematic manner. The type of community participation approach which the MTE would propose does not entail large investments of time in organising communities, but is meant to enhance the community role in decision-making with respect to project interventions and allocation of resources and lead to the empowerment of local communities in undertaking agriculture and resource development. Hence, the intentions could be seen as:

- **Soil and Water Conservation.** Community participation in the soil and water conservation programme does not mean collective land use planning. It is not feasible to expect that households will undertake collective land use planning. Households in the project area have a highly variable degree of dependence upon agriculture as a source of income. Farmers with relatively little reliance on land do not actually live on farms but visit them when required for harvesting or irrigation. In these circumstances a village based or collective approach to land use planning is not realistic. The current focus of the soil and water conservation programme on individual farms is appropriate. However, broad based consultation with the community can assist with better information dissemination, targeting relevant and vulnerable households, and for improvements in the programme to ensure that the poor are not excluded.

- **Olive Rehabilitation Programme.** The olive rehabilitation programme is currently undertaken on individual farms. A community participation approach in this component is advisable from the plant protection perspective. Most farmers who participated in the programme complained that there was not much use in the application of pesticides when farmers in adjoining fields were not undertaking proper pest control. An area-based approach is required for enhancing the efficacy of this aspect of the olive rehabilitation programme, which could best be achieved through a community participation approach. Thus under the olive rehabilitation activity, a community participation approach would be expected to increase information dissemination, improve targeting and help in sharing information about agriculture extension and pest control practices.

- **Spring Rehabilitation.** A technical survey is undertaken for each spring rehabilitation exercise. However, this survey does not include an economic or social appraisal of the schemes. It is important to have community ownership and contribution in the rehabilitation of the springs to ensure that the springs that are rehabilitated are used and maintained. The community participation approach would not entail the formation of spring users associations, for the purposes of generating maintenance funds (as happened in the CARE programme) but would be used for assisting in the design of the rehabilitation works, mobilisation of unskilled labour and sourcing local materials.

- **Mini-dams and Hafirs.** The technical aspects of the mini-dam and hafir construction works are considered in some detail. While the catchment area of each mini-dam and hafir is identified from the perspective of the physical aspects of the schemes, their social catchment is not rigorously determined. The dams and Hafirs are being undertaken without a systematic assessment of the benefits that will accrue from the programme. There is no reliable record kept of the potential number of beneficiaries from this activity and no indications that the traditional migration routes of the nomadic and transhumant herders are examined in selecting the location and relating the costs and potential benefits to the likely number of users. (Recent surveys undertaken of the changing life style of the nomadic herders suggest that their traditional routes may be changing due to the socio-economic changes taking place in Jordan.) A community participation approach will assist in the better location of these schemes and in helping to assess some of these issues. It would be unrealistic to expect that the communities will pay for structures on publicly owned land and as
• **The Women’s Programme.** Women are undertaking enterprise development on an individual basis. This has proved difficult with limited capital for initial investment and limited production and marketing skills and capacity. Women can achieve some benefits from undertaking these activities on a collective basis, as was envisaged at design through group formation. The benefits include pooling risks, sharing experiences, enhancing the quality of product through standardisation and taking advantages of the economies of scale in production and marketing. There is potential for the use of village-based women’s groups to undertake collective production and for an NGO to assist with collective marketing. Initial contact with JOHUD indicated their interest in helping women with enterprise development and collective marketing. There is need to adopt a group formation approach in enterprise development and marketing for women and potential for the inclusion of JOHUD, etc.

149. At the moment there is a lack of project staff orientation and training in community participation. The staff is tentative about a community participation approach and many do not believe that the community will participate or contribute to project activities. There is a need for the ARMP staff to appreciate and understand the reasons for adopting a community participation approach and being committed to this approach. Without staff commitment such an approach is unlikely to succeed. However, the existing ARMP staff has the capacity to undertake the type of community participation approach that is required for ARMP with proper commitment, orientation and training.

150. **Implementation of CP.** To indicate how the community participation approaches might be implemented the MTE has prepared a step by step guide for each activity: see appendix 3.

151. **NGO Involvement.** The CARE methodology has not clearly demonstrated its value added for the ARMP. Visits by the MTE mission did not reveal any difference in the springs rehabilitated by CARE and those rehabilitated by ARMP. The main achievement recorded by CARE was in the collection of 12% of the cost of the spring rehabilitation from the community. There are no NGOs involved with the type of agriculture development and resource management activities being undertaken by ARMP in the project area. Most of the societies and co-operatives work on a social welfare basis and their outreach is limited to one or two villages. The participation of an NGO in some of the collective projects such as spring rehabilitation, mini-dams and Hafir construction would be highly desirable. However, the current experience and approach of NGOs with spring rehabilitation does not add much value to ARMP. There were no NGOs found in the project area dealing with community participation aspects of mini-dams and Hafirs. The only real scope for participation of NGOs under ARMP seems to be with NGOs operating marketing programmes for women. For other components, it is concluded that ARMP itself develop an approach to community participation that would add value to its work and enhance the sustainability of its investments.

152. **Group Formation for Credit.** Donors and NGOs, such as GTZ and JOHUD, are currently implementing credit programmes where their approach to community participation is simply to create organisations (such as voluntary societies) at the local level which can receive grants and on-pass them as loans to women. It is quite understandable that they insist on the creation of a legal entity for their own accountability, as it would not be considered prudent, on their part, to give a grant to an informal group. Although some measure of training is provided to the members of the voluntary societies, the staff of these organisations work on a voluntary basis and have generally little or no previous background or experience in handling credit. As most of these funds are on-lent to women as interest free loans, it is unclear how long these funds will last and how the implementing organisation will recover its delivery and recovery costs. ACC has developed a model that is sustainable from the financial and institutional standpoint, but it excludes the poor. The need, therefore, is to design an approach to community development and/or group formation, which could offer the sort of collateral that ACC could accept. In this case the community development approach would have to be quite innovative and designed step by step with ACC, on the basis that ACC would also need to modify its
loan conditions to make such loans available. This is quite a challenge, but could also provide a significant breakthrough in reducing rural poverty.

C. ISSUE 3: THE APPROACH TO CREDIT

153. Although mitigating poverty is a high priority for GOJ, ACC’s loan terms and conditions are stringent and not appropriate to ARMP’s poverty alleviation objectives. Almost certainly, project credit beneficiaries are not from the poorest groups. There is an urgent need to ensure the coverage of assetless rural women who belong to the most underprivileged groups and who need small loans to finance IGAs. If IFAD’s development assistance strategy in Jordan is to continue support for GOJ’s efforts to improve the social and economic well-being of the rural poor, especially women, then either an alternative window needs to be opened through ACC, with appropriate support to mitigate the increased risks, or another credit channel needs to be tried or developed.

154. In its recommendations the MTE proposes a compromise approach through ACC. Its emphasis is on introducing a simple mechanism, which would be applicable for small loans, with minimum collateral requirements. The mechanism also allows for the protection of ACC’s interests, through reduction of costs and risks of lending to the poor. Although the introduction of the proposed mechanism might confront initial difficulties, it has implications for the ongoing and future rural development projects in Jordan. Three years is rather a short period for such a trial, but MOA and ACC together need to see this as an opportunity to confront a key constraint to rural development. The issue is whether these two organisations are ready to accept this challenge.

155. In addition, the present practices used for IGA loans mean that the borrowers are penalised because they have to sustain the burden of debt service for unduly long periods. This means that the intended impacts of the loans cannot be realized, and undermines the poverty alleviation potential. The issue is for ACC to be concerned with the viability of the activity financed, rather than solely the ability of the borrower or the guarantor to repay the loan. This means relating the loan size and repayments to a typical activity model and cashflow prepared and updated for different packages. Only by accepting to do this can ACC fulfil the intentions of ARMP and contribute to poverty alleviation.
VIII. RECOMMENDATIONS

A. General Recommendations

156. Participation in MOA Development Projects. It is strongly recommended that MOA utilise the remaining three years of project life to develop its own approach to participatory methods for use in its projects. This would involve a number of integrated activities, as follows:

- A clear policy statement on participation needs to be made, and operational guidelines and instructions prepared for the implementation of the policy.
- In the case of ARMP, the post of Community Development Officer in the PMU, which was scrapped at the beginning of the project, needs to be reinstated, and four more field officers appointed in the Field Units.
- The participatory approach needs to be integrated into the work plans and work habits of all members of the ARMP team or it will be unlikely to succeed, hence an orientation, training and visits programme needs to be devised for ARMP and MOA headquarters staff in community participation approaches to agricultural development.
- ARMP should make use of its technical assistance budget to employ short-term TA for community participation.
- Once these steps have been undertaken, then the community participation approach as described in Appendix 3 should be introduced in the remaining period of project life. The community participation approach suggested differs from one activity to the other, keeping in mind whether the activity is household based or community based, and is designed to improve the implementation methodology by empowering the community for local level decision-making for agriculture and resource management and development. Where activities are designed for individual households, the community role is to mediate and negotiate decisions based on consideration of equity and sustainability.
- There is need for careful monitoring of the value added and impact of adopting a community participation approach. The existing monitoring and data collection system should therefore be upgraded to include impact indicators for community participation.

157. Re-allocation of Funds. The project funds should be re-allocated along the lines put forward by the project management. However, before a re-allocation is submitted the project should examine the full consequences of the re-allocation on all project interventions, submitting justifications for the quantitative revisions. In addition the increased number of beneficiaries and the flow of benefits should be projected. ARMP should consider asking IFAD to assist with the preparation of this document, and should indicate the increased contributions expected from GOJ and the beneficiaries.

B. Resource Management

158. For On-Farm Soil and Water Conservation it is recommended that:

- The development of land use plans and on-farm soil and water conservation works should continue to be on an on farm basis rather than village or watershed basis.
- The minimum size criterion of four dunums for participation in the on-farm soil conservation programme should be replaced with a programme to select farmers based on poverty criteria.
- There should be an expanded demonstration and field testing of other water harvesting methods (such as micro-catchments) by NCARTT/Extension system, with the project role including the identification of farmers and assisting in the organisation of field days and training.

159. For Off-Farm Soil and Water Conservation it is recommended that:

- Detailed analyses of the number of potential beneficiaries and livestock should be conducted to assist in selection of sites for mini-dams and hafirs, determination of capacity required and to
determine benefits from this activity. A greater degree of beneficiary participation in site selection and design should also be sought.

- In principle, the size of the dams should be limited to maximum of about 15 000 m³ to allow a larger number of smaller structures to be constructed.

160. For Spring Rehabilitation it is recommended that:

- Additional resources, including a field engineer and vehicle, should be provided in each field unit to be responsible for spring rehabilitation and canal lining activities. This would allow for greater concentration of effort on spring rehabilitation, plus greater beneficiary involvement in all the activities.
- The size restriction of two dunums should be lifted to allow staff to work with groups of farmers in spring areas, both for technical reasons (common spraying against pests such as scale insects and olive stem borer) and to increase benefits from spring rehabilitation works.

C. Agricultural Development

161. Fruit Tree Planting and Rehabilitation.

- It is recommended that project extension staff follow-up the maintenance of newly planted fruit trees until the trees start bearing, since optimum yields, and hence the best return on the investment, can only be obtained through correct and timely pruning, fertiliser application and the use of plant protection materials.
- Similarly, follow-up in the years after rehabilitation is also required, since full benefits cannot be achieved without continued fertiliser applications and pest control.
- There is scope for carrying out demonstrations and field tests of tree crops such as pistachios, particularly in southern parts of Tafila. This activity could be carried out by the NCARTT station at Shoubek under an agreement with the project, using project funds.

162. Intensification of Field Crop Production. Cereal crop demonstrations should be discontinued directly through the project. This would allow extension staff to focus on olive production and spring rehabilitation, both of which have a greater impact. However, there may be a longer-term impact of the demonstration activity in support of GOJ’s policy to encourage a shift in cropping patterns. Accordingly, it is recommended that NCARTT, which is the MOA agency directly responsible for technology development and transfer, should undertake this activity under an agreement with the project using the funds allocated for this activity.

D. Rural Financial Services

- Eligibility Criteria. To ensure that those from poor households benefit from project support, the PMU should ensure that a uniform family income ceiling is applied throughout the project area to identify credit beneficiaries.

- Loans for Supplementary SWCs. In order to ensure compliance with the project Loan Agreement, ACC should not allow loans for the construction of farmhouses as part of SWC activities.

- Broadening Credit Outreach. To provide women from the most disadvantaged households with access to credit, the project management and ACC should, in mutual consultation, initiate action to develop alternative mechanisms that broaden the credit outreach. The objective should be to demonstrate the effectiveness and sustainability of a micro-credit development model. This would seek to benefit from the strengths of NGOs in understanding the problems of the rural poor as well as compensating ACC for the higher transaction costs and credit risks, and which could, based on

These four additional staff also provide the extra capacity to implement the community participation proposals.
experience gained, be replicated in other future projects. The suggested approach is described in detail in Appendix 2.

- **Broadening Income Diversification Opportunities.** There is an urgent need to broaden the range of suitable IGAs to assist rural women from the target group to benefit from a choice of diversified and profitable income generating opportunities. This requires that the feasibility study included in the project design is commissioned as soon as possible.

- **Determination of Loan Amounts and Repayment Periods.** Loan amounts should be strictly limited to the outlay required for the IGA financed, as the burden of debt service for a higher loan than necessary results in a reduction of the financial impact in terms of increased income for the borrower. In addition, instead of the present standard period of eight years, loan repayment periods should be adjusted to the net cashflow of the activity financed and include, where justified, appropriate grace periods. The implementation of these measures would permit ACC to service a larger number of borrowers with the available loan funds, and this process would be further facilitated due to faster recycling of loan repayments through the Revolving Fund.

- **Loan Processing Delays.** In order to reduce delays in approving credit applications, the PMU and ACC should, in joint consultation, introduce a system under which all loan applications, after a preliminary scrutiny and certification of eligibility, are directly sent to the ACC branch for appraisal and approval.

- **Revolving Fund.** ACC should maintain the Revolving Fund in an account to which interest accrues at a positive real rate. This is also of benefit to ACC, as the subsidiary loan agreement provides for ACC’s repayments to be in JOD, at the exchange rate prevailing at the time the funds are repaid.

- **ACC Restructuring.** The study on ACC restructuring and transformation into a rural finance bank should be expedited. This would, among other things, facilitate introduction of savings-linked micro-credit programmes, which have significant advantages for poor rural clients (e.g. consumption smoothing and saving for loan repayment or unforeseen eventuality).

- **Increasing Funds Allocation for the Women’s Programme.** Since the demand for loans for land consolidation is very low consideration should be given to the re-allocation of these credit funds to meet increased demand under the women’s credit programme. In addition, further use of substantial funds allocated for institutional strengthening is unlikely, and these might also be used in the credit programme.

### E. Women’s Development

- **Improved Technical Support.** The appraisal included a range of TA intended to fill the knowledge gaps and refine the project design. This TA should be immediately initiated, covering:
  - a feasibility study to identify suitable income generating activities;
  - NGO support under contract to assist in pre-credit activities for women, including group formation and training;
  - provision of funds to support action-oriented market research to assist women market their products.

- **Production and Marketing centres.** The project needs to address the twin problems faced in establishing and maintaining production standards, and in marketing. The approach recommended is to establish, on a trial basis, district-based production and marketing centres, using funds which would otherwise be unutilised from the women’s programme. These units should be established in districts where an NGO or CBO is willing to undertake the responsibility for implementation with the project supporting initial set-up costs. These centres should also be used for training. Technical assistance should be employed for the development of proper brand names, the standardising
product specifications, proper packaging and sales. These centres can be developed to act as consolidation and marketing outlets for village based production units where women form groups to undertake production activities jointly. Group based activities should be encouraged, possibly by the provision of storage and processing equipment.

- **Use of the ACC database.** ACC has developed an excellent computerised database of its loan applicants and keeps good socio-economic data on its borrowers. However, this information is not used for programmatic decision-making or for feedback to ACC or ARMP management. This data should be analysed and used for regular reporting and evaluation of the loan applicants, and used by ACC for improving its loan products and portfolio.

- **Staff Training.** There is a need to provide institutional and technical support to WID staff through additional training in enterprise development, group formation, communication skills and monitoring and evaluation skills.

**F. Project Management, Coordination and Institutional Strengthening**

- **Technical Assistance and Studies.** Both the scope of the project and the capacity of staff have been restricted by: (i) the reluctance to make use of the technical assistance provided for in the project design; (ii) the non-engagement of outside agencies in areas where the Ministry does not have competence; and (iii) the lack of research and studies where necessary to develop the technology required for the project. This should be corrected in the second half of the project life. The TORs of the PSC should be extended to pay particular regard to these shortcomings.

- **MIWR as an Implementing Agency.** The MIWR should be recognised as one of the implementing agencies for the project, especially concerned with the optimisation of water resource use. The role of MIWR should be defined and MIWR should be represented on both the RACC and the PSC.

- **Post-project activities.** MOA needs to address the question of the continuation of project activities post-project, and the role of the additional staff in the SWC Field Units. This should also include the expansion of the routine work programmes of existing Field Units to ensure that benefits and impacts of the development activities undertaken are fully realized.

- **Clarification of Coordination Roles.** The Coordination and Steering Committees both have important, but very distinct roles to play in project implementation. It would be useful if both committees prepared terms of reference for their areas of authority, in order to avoid wasteful and unnecessary frictions arising between them. In general decisions concerning only ARMP should be taken at the Regional level, whilst decisions with implications wider than ARMP should be taken by the PSC.
IX. LESSONS

A. The Sequence of Project Processing

163. The approach described in the project design is clearly participatory and relies on a partnership between the implementing agencies and the beneficiary communities. To support this, provision was made to employ assistance in terms of skills, extra capacity and training to fill the gaps in MOA capabilities. The design does not make it clear that this approach represented a major change for MOA, and it would have been useful if one of the objectives had been to introduce such an approach. At the same time the designers failed to spot that previous projects (for example Zarqa, which is quite similar to ARMP) had a different implementation approach. There was a need, quite simply, to discuss the intended approach with government, before the design was completed in detail. In addition to the implementation approach, the project includes activities, which are at variance with GOJ policies, strategies and practices.

164. The most probable cause of the above is that the implementation version of the appraisal was actually prepared after the loan had been signed. Whilst the formulation should properly conceptualise different and possible solutions to address the project goals, the appraisal has to be rigorously practical. The lesson for IFAD is simply that there can be a high price to pay for shortcuts in project processing.

B. Institutional Strengthening

165. IFAD is currently supporting four projects implemented through PD in MOA. Although institutional strengthening is funded for ACC and to establish the new Field Units in the four Directorates of Agriculture under ARMP, no support is provided for the Projects Directorate, even though, under the management system in the MOA, the Directorate has active roles in all the projects, and has central units to review progress. This task is made more difficult because all the projects use implementation and monitoring mechanisms that are not uniform. If the monitoring and MIS systems for these projects had been unified, then a more strategic overview of the development impacts of the portfolio could be established, and monitored by PD. This would also have been of help to the M&E Directorate of MOA. The lesson is that in preparing the Country Strategies and Opportunities Paper (COSOP) it is worthwhile to try and identify agencies such as the PD, which have a central role to play in the development of the portfolio, and to consider strengthening for such agencies to improve their monitoring role for the whole portfolio.

166. In addition, the institutional strengthening for ACC was poorly conceived and is unlikely to be used. The reason for this is the terms and conditions applicable to the repayment of funds from the borrower government to the credit institution for institutional strengthening are the same as those for the credit line. For institutional strengthening this is unreasonable and places in jeopardy the attainment of the objective of ensuring a strong presence of the credit agency in the project area, for closer and regular interface with the beneficiaries. The lesson for the borrower is that credit and other funds for credit agencies need to be separated when determining repayments, and for IFAD the terms for on-passing funds need to be agreed as part of the loan negotiations.

C. Credit Institutions and The Poor

167. Specific and well-defined interventions to broaden the credit outreach to cover the assetless poor in the target group should have been included in the project design. This would mean sufficient attention to capacity building and participation to motivate and promote self-help and self-reliance through group action and training, and assistance to cover transaction costs and credit risks of the credit network to encourage lending to the poorest in the target group. Standard ACC terms and conditions for loans are not appropriate to underprivileged rural women. It is unrealistic to expect a credit agency such as ACC to choose to develop a specific window for the poor, unless sufficient incentives and risk funds are both included in the project costs, and there is at least the outline of an agreement as to how the arrangements will work. Even then, the commitment of the credit agency may not be assured.
The willingness to act may also have been reduced because of the funding arrangements for institutional strengthening, as described above. Under these circumstances a preferred approach may be to work both with a formal agency, such as ACC, and also to try and on-pass credit through more informal agencies, such as the NGOs available in Jordan. This may require an element of grant funding, which can be very small and considered as seed capital.

D. Commitment to Community Participation

Community participation entails costs for both the implementing agency and the beneficiary community. As such, the benefits and value added of a community participation approach have to be clearly demonstrated for each aspect of a programme or activity in which community participation is envisaged. The ARMP preparatory documents made a broad commitment to a community participation approach but they did not specifically outline the value added of this approach or outline how it would be implemented. Specific procedures have to be laid down for community participation, if it is expected that the approach will be followed in a systematic manner. These procedures have to be included as an integral part of the implementation strategy and operating procedures and have to be included in the individual job descriptions of staff. Lessons regarding community participation from a parallel programme (such as that implemented by CARE) cannot be expected to be automatically transferred. Furthermore a community participation approach requires policy commitment at the highest level, staff training, beneficiary mobilisation, demonstration and proper monitoring and evaluation.

E. Impact Measurements facilitate Project Management

ARMP is currently collecting data on many of its activities, such as soil and water conservation and olive rehabilitation, however, the data being collected is not recorded in manner that would help to properly identify the impacts of the programme. Very little data is being recorded for the spring rehabilitation, dams and hafir programmes, and whilst the WID programme keeps good output data, no data is being generated on impacts. ACC has developed computerised data system for recording socio-economic information on its borrowers, but this data is neither analysed nor used.

There has to be an internal demand from the project for regular data on outputs and impact of programme activities, in order for it to be valued. The main need for such data is to demonstrate progress towards objectives that are difficult to measure, such as improved livelihoods, and to facilitate effective project management. In ARMP monitored data has given a sufficiently clear picture for the project management to be able to recognise the need to re-direct project activities. However, this re-direction is geared mostly to the project’s implementation capacity, and is barely influenced by the impacts that have occurred so far. In order to properly measure the impact of a programme, it is important to identify the input, output and impact indicators from the outset. The types of data that will be required have to be identified clearly with clear assignment of responsibility for data collection. Each section of the PMU and the field units need to be assigned responsibility for data collection; it cannot be the responsibility of the M&E unit alone.

It is then the combination of these data into a management information system that allows the project management to take informed decisions and guide implementation towards the agreed targets and objectives. The lesson is that impact data needs to be an integral part of the management process, from the beginning of the project.

F. Reaching Intended Beneficiaries

Poverty criteria are needed to identify the poor – not landholdings. Farmers in ARMP essentially self select themselves for participation in the various programmes and there are some aspects of the ARMP selection criteria and methodology which actually exclude the poor. Land holdings are split to take advantage of project SWC activities, and ACC collateral requirements and loan periods result in loans not going to the poorest. The lesson is that the poor and vulnerable households have to
be specifically targeted if they are the intended beneficiaries of a programme. The approach to targeting the poor, female headed households and households with a greater reliance on agriculture has to be carefully determined and included in the operating policy and procedures of the project. ARMP is in a strong position to reconcile the twin objectives of poverty alleviation and agriculture growth, but only if the selection criteria are relaxed.
# APPENDIX 1

ARMP – Project Progress Reports for 30/06/2000

## Table 1: Soil and Water Conservation

<table>
<thead>
<tr>
<th>Item</th>
<th>Whole Project</th>
<th>Year 2000</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Target</td>
<td>Achievement</td>
<td>Per Cent</td>
</tr>
<tr>
<td>1. On-farm civil works</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Stone Walls</td>
<td>50,000du</td>
<td>34,860</td>
<td>70</td>
</tr>
<tr>
<td>- Gradoni Terraces</td>
<td>13,000</td>
<td>120</td>
<td>1</td>
</tr>
<tr>
<td>- Contour Guidelines</td>
<td>13,000</td>
<td>480</td>
<td>4</td>
</tr>
<tr>
<td>- Tree Basins</td>
<td>6,500</td>
<td>560</td>
<td>9</td>
</tr>
<tr>
<td>- Cisterns</td>
<td>56,000 m³</td>
<td>35,180</td>
<td>63</td>
</tr>
<tr>
<td>- Stone fences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Off-farm Civil Works</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Dams</td>
<td>130</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>- Hafeers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Gabions</td>
<td>2750</td>
<td>2141</td>
<td>78</td>
</tr>
<tr>
<td>3. Training of Staff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Courses</td>
<td>12</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>- Field Visits</td>
<td>400</td>
<td>30</td>
<td>7.5</td>
</tr>
<tr>
<td>- Materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Training of Beneficiaries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Demonstrations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Promotion Campaigns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Technical Assistance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Water Harvesting</td>
<td>6</td>
<td>5</td>
<td>83</td>
</tr>
<tr>
<td>- Surveys</td>
<td>5</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>- NGOs</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Operating Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Soil and Water Conservation</td>
<td>27,310</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cisterns</td>
<td>136,233</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Agricultural Development

<table>
<thead>
<tr>
<th>Item</th>
<th>Whole Project</th>
<th>Year 2000</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Achievement</td>
<td>Per Cent</td>
</tr>
<tr>
<td>1. Off-Farm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Maintenance of Canals</td>
<td>8,390</td>
<td>11,824</td>
<td>141</td>
</tr>
<tr>
<td>- Maintenance of Springs</td>
<td>105</td>
<td>39</td>
<td>37</td>
</tr>
<tr>
<td>2. On-Farm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Tree Planting</td>
<td>18,750</td>
<td>10,893</td>
<td>58</td>
</tr>
<tr>
<td>- Rehabilitation of Olives</td>
<td>11,250</td>
<td>1962</td>
<td>18</td>
</tr>
<tr>
<td>- Fences</td>
<td>9,800</td>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td>3. Staff Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- for olive rehabilitation</td>
<td>1</td>
<td>3</td>
<td>129</td>
</tr>
<tr>
<td>- cereal demonstrations</td>
<td>1</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>- environmental awareness</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- annual training</td>
<td>1</td>
<td>4</td>
<td>400</td>
</tr>
<tr>
<td>- field visits</td>
<td>4</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>4. Beneficiary Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- for olive rehabilitation</td>
<td>60</td>
<td>17</td>
<td>28</td>
</tr>
<tr>
<td>- cereal demonstrations</td>
<td>60</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>- environment</td>
<td>60</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td>- field visits</td>
<td>12</td>
<td>11</td>
<td>92</td>
</tr>
<tr>
<td>- Promotional Campaigns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Studies and Surveys</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Technical Assistance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3: Women in Development

<table>
<thead>
<tr>
<th>Item</th>
<th>Whole Project</th>
<th>Year 2000</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Achievement</td>
<td>Per Cent</td>
</tr>
<tr>
<td>1. Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- for Food Processing</td>
<td>112</td>
<td>39</td>
<td>35</td>
</tr>
<tr>
<td>- Dairy Processing</td>
<td>112</td>
<td>101</td>
<td>90</td>
</tr>
<tr>
<td>- Vegetables and Fruits</td>
<td>80</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>- Back Yard Stock</td>
<td>32</td>
<td>22</td>
<td>96</td>
</tr>
<tr>
<td>- Marketing</td>
<td>48</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>- Promotional Campaigns</td>
<td>12</td>
<td>59</td>
<td>4</td>
</tr>
<tr>
<td>2. Technical Assistance</td>
<td>1200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 4: ACC Loans - Numbers

<table>
<thead>
<tr>
<th></th>
<th>Dairy Processing</th>
<th>Chickens</th>
<th>Sheep Fattening</th>
<th>Rabbits</th>
<th>Plastic Tunnels</th>
<th>Food Processing</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karak</td>
<td>108</td>
<td>58</td>
<td>66</td>
<td>1</td>
<td>1</td>
<td>165</td>
<td>399</td>
</tr>
<tr>
<td>Tefila</td>
<td>81</td>
<td>15</td>
<td>37</td>
<td>1</td>
<td>1</td>
<td>60</td>
<td>193</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>73</td>
<td>103</td>
<td>1</td>
<td>1</td>
<td>225</td>
<td>592</td>
</tr>
</tbody>
</table>
APPENDIX 2
PROPOSED ARRANGEMENTS FOR DELIVERY OF MICRO-CREDIT TO POORER TARGET GROUP WOMEN

A. Rationale

1. Of the over 2 100 target group women trained under ARMP to establish and operate simple businesses, only about 574 or 27% have been financed to support IGAs. Of the remainder, many were attracted in the initial project years due to the incentive of cash compensation (JOD 5 per day of training), which was discontinued during 1998. Some others do not need to borrow or have not borrowed for religious reasons. Even so, around 500 trained women, particularly belonging to poorer sections of the rural society, are estimated to have not been able to establish an IGA of their preference because of lack of access to ACC credit; the main reason being their inability to comply with the stiff requirement of monthly deductions from the salary of a relative or friend insisted by ACC. The critical need of these rural poor is the access to micro-credit services (individual loans not exceeding JOD 500) for smallscale businesses perceived as financially attractive by them. The project area rural communities and the PMU and ACC staff recognise that providing such access to credit to the most vulnerable segment of the target group women would be an effective poverty alleviation tool and crucial to attain the ARMP objective of improving livelihoods of the rural disadvantaged.

B. Objectives

2. The main objective would, therefore, be to build-up a financially viable and efficient alternative mechanism to provide rural women from the most disadvantaged households with access to micro-credit, without insisting on monthly salary deduction, but backed by appropriate measures to ensure community management and self-supervision to reduce costs and risks and also to compensate ACC not only for likely higher credit risks but also as an incentive to undertake lending free of monthly salary deductions or rigid collateral requirements. An associated objective would be to test a mechanism to reach the poorest among the poor which, based on experience gained, could be replicated under future projects.

C. Suggested Approach

3. Drawing on experience under the micro-credit programmes implemented by NGOs with grant assistance and forging combination of social and financial intermediations through ACC/NGO partnership for sustainability and better results, the suggested approach would include the following steps:

- identification of compact areas comprising two to three villages each having potential to cover at least up to 50 poorer women in need of small loans to finance an IGA. For this purpose, PMU would solicit the services of an NGO on contract which has: (a) a good track record; (b) some previous experience of mobilising rural poor women into community organisations of their own and training and guiding elected managements and members; and (c) interest in brokering relations and linking such community organisations with financial institutions (in this case ACC) for micro-financial services. Actual identification of the potential areas would be done jointly by the representatives of the PMU, NGO and ACC;
- conduction of a series of area level information and sensitisation meetings aimed at ascertaining and raising interest in the possibility of poor women combining together as a group for micro-credit services;
- depending on interest exhibited and in line with a demand-driven approach, final selection of areas for formation of community women’s groups (CWGs), that is, either village voluntary societies registered with MOSD or cooperative societies;
briefing sessions/training of CWG elected committee members and women leaders in the management of micro-credit (individual loans not exceeding JOD 500) financed through a special “Small Loans Window” opened by ACC; identification of economically viable IGAs of members’ choice; selection of beneficiaries; framing of loan terms and conditions, including individual loan amounts and ceilings; collateral for individual loans (preferably group guarantees after promoting formation of informal groups of five to six members within each CWG); loan repayment periods; and maintenance of simple books and records;
- designing of procedures and terms and conditions governing flow of ACC funds from the “Small Loans Window” and their repayment by CWGs. While loans from each CWG to its members would be for periods justified by each IGA, the funding from ACC’s “Small Loans Window” to CWGs could be for longer periods permitting the CWGs to revolve credit funds;
- interest rate on individual loans would be 1% to 2% above the ACC’s rate of interest or, in other words, CWGs would retain an interest margin to cover their costs;
- creation of “Micro-Credit Risk Fund” to guarantee repayments from CWGs to ACC in order to allow ACC to incorporate into its lending programme the risk prone micro-lending through CWGs, without land or salary deduction requiring collateral; and
- M&E of the proposed arrangement.

D. Role of NGO

4. The strengths of NGOs lie in their: (a) understanding of the rural environment and the perceptions and problems of rural poor; and (b) ability to lift people out of poverty and graduate them to attain self-sustained economic status. Social intermediation is the strength of NGOs, whilst financial intermediaries are not equipped to function as effective social intermediaries. Under the proposed arrangement, the role of participating NGO would be as follows:

(a) participation in initial surveys to identify potential compact areas and conduction of area level information and sensitisation meetings leading to final selection of areas to be covered by the proposed arrangement;
(b) motivating poor rural women to form area level CWGs and small informal groups within each CWG;
(c) educating and training CWG committee members and women leaders in managing group activities such as conduction of meetings, linkage with ACC, managing funds and small loans portfolio, simple book-keeping, etc.;
(d) educating and training CWG members to utilise credit properly and develop group liability or peer pressure as substitute for collateral; and
(e) help CWG members by providing needed access to technical services and marketing assistance for their products.

E. Role of ACC

5. ACC would be responsible to perform the following functions:

(a) participate in the identification and selection of compact areas and formation of CWGs;
(b) open a “Small Loans Window” using project credit funds to ensure provision of efficient micro-credit services to poor rural women through CWGs;
(c) finalise, in consultation with the participating NGO, the procedures for flow of funds to CWGs, the repayment of funds with interest by them, the loan documentation and records to be maintained by CWGs;
(d) decide without delay on loan applications and deliver credit to CWGs promptly;
(e) formulate, in consultation with the participating NGO, a programme for effective post-disbursement credit follow-up and timely recovery of CWG loans;
(f) assist in the establishment and maintenance of “Micro-Credit Risk Fund”; and
(g) bear the credit risk.
F. Programme Management

6. The agreement to implement the arrangements suggested as above would be formalised by signing of a Memorandum of Understanding (see Attachment). A three-person committee represented by PMU, ACC and NGO would meet periodically to coordinate, guide and review implementation progress.

G. Micro-Credit Risk Fund

7. It is estimated that about 8 CWGs would be organised and provide micro-credit services to a total of about 300 poor rural women during the rest of the ARMP period. The volume of total micro-credit business handled is estimated not to exceed JOD 150,000. On the basis of a provision for bad debts at a liberal rate of 10% (due to the pilot nature of the proposed arrangement), a risk fund of not more than JOD 15,000 would need to be created. Ideally, GOJ and/or ACC should participate by sharing one-third contribution to the Fund; thus requiring a project allocation of JOD 10,000. The Fund would be maintained in a special account by ACC and write-offs from it would be approved by PCC. After the closure of ARMP, the fund would be retained by ACC on its own account as a risk coverage facility for continued micro-lending through its “Small Loans Window”.

H. Compensation for NGO Services

8. The mobilisation and development of CWGs would cover two phases. Phase I would cover formation and graduation to maturity and extend for a period of up to one year. Phase II would be stabilisation of CWG and final withdrawal of NGO and would also extend for a period up to 1 year. Compensation to the participating NGO for Phase I would be higher than for Phase II. Payments to NGO should be performance-based and, therefore, in instalments as under:

<table>
<thead>
<tr>
<th>Instalment as % of Total Compensation for the Relevant Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I:</td>
</tr>
<tr>
<td>Participation in Identification and Selection Surveys</td>
</tr>
<tr>
<td>Information/ Sensitisation Meetings</td>
</tr>
<tr>
<td>Organization of CWG</td>
</tr>
<tr>
<td>Linkage of CWG to ACC</td>
</tr>
<tr>
<td>Phase II</td>
</tr>
<tr>
<td>Completion of Education and Training of CWG Committees and Members</td>
</tr>
<tr>
<td>Provision of Technical/ Marketing Assistance</td>
</tr>
<tr>
<td>Timely Repayments of Individual Loans and Withdrawal</td>
</tr>
</tbody>
</table>

30 ARMP is scheduled to close at the end of 2003 (refer the Hashemite Kingdom of Jordan Draft Country Strategic and Opportunities Paper, IFAD, October 2000).
9. It is difficult to estimate the exact level of compensation for the two phases, but evidently the incremental costs involved for NGOs with existing network in the project area would be relatively low. A rough estimate is a compensation of JOD 2,500 per CWG (JOD 1,500 for Phase I + JOD 1,000 for Phase II) or a total amount of JOD 20,000, for which a provision already exists under the category IV (a) of IFAD Loan for ARMP (see Schedule 2 to Loan Agreement dated 15th January 1996).

I. Benefits

10. The most important benefit would be to demonstrate how ACC, as almost the exclusive institutional source of rural credit in Jordan, can enter the sphere of micro-lending by involving an NGO as a facilitator in institutionalising poor people’s access to productive credit through establishing coherent links between rural community groups and ACC. Once the community groups become fully matured and stabilised, they would be able to manage their own affairs without any external support and maintain direct links with ACC. Thus, the advantage is of sustainability as the whole arrangement would develop into a financially viable mechanism. The question is who bears the cost of group mobilisation and development. No doubt, external support would be needed to meet these costs until sufficient number of matured and stabilised groups are linked with ACC. Once this stage reached, ACC’s saving in terms of costs of credit officers and credit administration services on the volume of business handled would be sufficient to enable it to earmark a part of interest spread to pay on its own for NGO services for mobilisation and development of new community groups.

11. Another advantage for ACC, when it transforms into a bank, is the existence of a ready rural network for increased and less costly deposit mobilisation. From the GOJ’s perspective, broadening of ACC clientele to incorporate rural community groups would be vital to meet the growing and diverse needs of rural micro entrepreneurs and in turn alleviate problems of rural poverty and unemployment.

12. For IFAD a mechanism would be tested to reach financial services to the poorest among the poor under the ARMP and with the benefit of experience, it could be replicated in other similar projects. For this reason, if there were problems to find necessary funding under ARMP to implement the proposed arrangement, there would seem to be a justification to consider an ECP grant facility.

J. Draft Memorandum of Understanding

APPENDIX 3

AN APPROACH TO COMMUNITY PARTICIPATION

The community participation approach, which is suggested here, is consistent with the local production systems and common infrastructure management systems. The community participation approach given here differs from one activity to the other keeping in mind whether the activity is household based or community based. There are limits to community participation in that interventions designed for a household level cannot be implemented on a joint basis. The community participation approach suggested here is designed to improve the implementation methodology and give a greater role to the community in decision-making and empowering the community for local level decision-making for agriculture and resource management and development. Even where activities are designed for individual households, these objectives can be achieved by giving the community the responsibility for mediating and negotiating decisions based on consideration of equity and sustainability. The following sections outline an approach to community participation for the remaining period of the project life.

Objectives of Community Participation

- Enhancing community role in decision-making with respect to project interventions and allocation of resources and the empowerment of local communities in undertaking agriculture and resource development.

- To build ownership of project investments by requiring that beneficiary households contribute to the cost of the project through supply of labour and local materials, supervision of design or assist in determining the location of community infrastructure investments.

A. Soil and Water Conservation Activities

Recommended Approach

Step 1: Initial Village Contact: The Social Organizer (SO) visits a village and contacts the village elders, the Mukhtar, if one is present in the village, the local mosque an existing voluntary society or co-operative and outline the objectives of the programme. The help of one or all of these contact persons and groups will be enlisted as appropriate for information dissemination about the SWC programme. The SO will brief these contact groups about the objectives of the project and request a meeting with as many of the villagers as can be collected at a future date. The SO will ask the contact groups to ensure that households with a greater reliance on agriculture incomes and poor and female-headed households will be especially identified and asked to attend. A time and date is fixed for a general village meeting in which the contacted persons agree to do their best to ensure the participation of the maximum number of inhabitants in the village.

Step 2: General Village Meeting: The Social Organizer and the Land Use Planner visit the village on the appointed time and date and explain the objectives of ARMP to the potential beneficiaries. The Social Organizer and the Land Use Planner explain that due to the demand of the SWC activities the project must give priority to households who are poor (Less than JD 1200 per annum household income) and cannot undertake the activities on their own, households which rely on agricultural incomes for more than 50% of their incomes and female-headed households.

Step 3: Preparation of Village Beneficiary Profile: At the end of the general briefing a one page village information sheet will be filled out in a participatory manner which records the total number of households in the village, the number who depend upon agriculture for more than 50% of their income and the number of poor and female-headed households. ARMP staff ask the participants to identify those households present who have more than 50% reliance for their incomes on agriculture and the poor and female-headed households.
Step 4: Identification of Potential Beneficiaries: The Monitoring Section will design a simple form that should be filled by each household identified as relying on agriculture for more than 50% of their income, poor (less than JD 1200 per annum per household) and/or female-headed households.

Step 5: Follow-up visits: Follow-up visits will be made to these households by the Social Organizer to ascertain whether these households will participate in the soil and water conservation component and if not, to identify the special constraints identified by them which prevent them from participating. In case these households are unable to participate because of a criterion that might exclude them such as requirement for upfront funds for soil and water conservation, or minimum land criterion, land fragmentation, etc this needs to be carefully recorded.

Step 6: Facilitating the participation of vulnerable households: The information collected will be analysed and PMU will identify the means for encouraging the participation of these households. In case there is a technical reason for the lack of participation (slope of land, minimum landholding, lack of water, soil conditions, land fragmentation, etc) these will be recorded. PMU will examine such cases and facilitate the participation of these vulnerable households through review of arrangements that will make it possible for them to participate. For example, arranging payment of funds upfront rather than at the end of the completion of soil and water conservation works.

Table 1
Summary of Community Participation Matrix
Soil and Water Conservation

<table>
<thead>
<tr>
<th>Activity</th>
<th>Step Wise Actions</th>
<th>Responsibility</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil and water</td>
<td>Step 1: Initial village contact.</td>
<td>Social Organizer</td>
<td>Effective and transparent system of information dissemination.</td>
</tr>
<tr>
<td>Conservation</td>
<td>Step 2: General village meeting.</td>
<td>Social Organizer and Land use planner</td>
<td>Better targeting of households with a greater reliance on agriculture incomes to ensure that the investments made by the project will result in enhanced agriculture production and incomes.</td>
</tr>
<tr>
<td></td>
<td>Step 3: Participatory process is followed to complete village household profile fact sheet.</td>
<td>M&amp;E Section to prepare village profile fact sheet. Social Organizer, Land Use Planner and community members.</td>
<td>Identification of vulnerable households especially the poor and female-headed households in order to assist with poverty alleviation and enhance the food security situation of these households.</td>
</tr>
<tr>
<td></td>
<td>Step 4: Villagers identify poor, female headed households and those with more than 50% reliance on agriculture income for participation in the SWC programme.</td>
<td>Social Organizer, Land Use Planner and community members.</td>
<td>Identification of the constraints of vulnerable households to participation in ARMP activities and the improvement and refinement of a strategy to encourage their participation.</td>
</tr>
<tr>
<td></td>
<td>Step 5: Follow up visits for identification of constraints to participation</td>
<td>Social Organizer and potential beneficiaries.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Step 6: Identifying opportunities for participation in the SWC activities.</td>
<td>PMU.</td>
<td></td>
</tr>
</tbody>
</table>
Recommended Approach

**Step 1: Initial Village Contact:** The Social Organizer will visit a village and contact the village elders, the *Mukhtar*, if one is present in the village, the local mosque an existing voluntary society or co-operative and outline the objectives of the programme. The help of one or all of these contact persons and groups will be enlisted as appropriate for information dissemination about the Olive Rehabilitation (OR) programme. ARMP staff will brief these contact groups about the objectives of the project and request a meeting with as many of the villagers as can be collected at a future date. ARMP staff ask the contact groups to ensure that households with a greater reliance on agriculture incomes and poor and female-headed households will be especially identified and asked to attend. A time and date is fixed for a general village meeting in which the contacted persons agree to do their best to ensure the participation of the maximum number of inhabitants in the village.

**Step 2: General Village Meeting:** The Social Organizer and the Extension Agent visit the village on the appointed time and date and explain the objectives of ARMP to the potential beneficiaries. The Social Organizer and the Extension Staff explain that the project must give priority to those households who are poor (Less than JD 1200 per annum household income) and cannot undertake the activities on their own, households relying on agricultural incomes for more than 50% of their incomes and female-headed households.

**Step 3: Preparation of Village Beneficiary Profile:** At the end of the general briefing a one page village information sheet will be filled out in a participatory manner which records the total number of households in the village, the number who depend upon agriculture for more than 50% of their income and the number of poor and female-headed households. ARMP staff ask the participants to identify those households present who have more than 50% reliance for their incomes on agriculture and the poor and female-headed households.

**Step 4: Identification of Potential Beneficiaries:** The Monitoring Section will design a simple form that should be filled by each household identified as relying on agriculture for more than 50% of their income, poor (less than JD 1200 per annum) and/or female-headed households.

**Step 5: Participatory Strategy for Pest Management:** A few villagers are nominated to undertake the responsibility of informing the other villagers about the pest management programme and developing a strategy for area control. These nominees will inform ARMP about the course of action and the contribution that the farmers are willing to make and the expectations from ARMP in this regard.

**Step 6: Terms of Partnerships:** A terms of partnership is agreed between ARMP and the potential beneficiaries about the responsibility of each in terms of pest management and control as part of the olive rehabilitation programme.

**Step 7: Follow-up visits:** Follow-up visits will be made to the households identified in Step 4 above by the Social Organizer to ascertain whether these households will participate in the olive rehabilitation programme and if not, to identify the special constraints identified by them which prevent them from participating. In case these households are unable to participate because of a criterion that might exclude them such as minimum land criterion, land fragmentation, etc this needs to be carefully recorded.

**Step 8: Facilitating the participation of vulnerable households:** The information collected will be analysed and PMU will identify the means for encouraging the participation of these households. In case there is a technical reason for the lack of participation (minimum landholding, lack of water, soil conditions, land fragmentation, etc) these will be recorded. PMU will examine such cases and facilitate the participation of these vulnerable households through review of arrangements that will make it possible for them to participate. For example, by reviewing if the minimum land holding criterion can be relaxed.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Step Wise Actions</th>
<th>Responsibility</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olive Rehabilitation (OR)</td>
<td>Step 1: Initial village contact.</td>
<td>Social Organizer</td>
<td>Effective and transparent system of information dissemination.</td>
</tr>
<tr>
<td></td>
<td>Step 2: General village meeting.</td>
<td>Social Organizer and Extension Agent</td>
<td>To enable farmers in adjoining fields to undertake collective pest management and control for effective treatment of the olive orchards.</td>
</tr>
<tr>
<td></td>
<td>Step 3: Participatory process is followed to complete village household profile fact sheet.</td>
<td>Social Organizer, Extension Agent and community members.</td>
<td>Better targeting of households with a greater reliance on agriculture incomes to ensure that the investments made by the project will result in enhanced agriculture production and incomes.</td>
</tr>
<tr>
<td></td>
<td>Step 4: Participatory Beneficiary Identification.</td>
<td>Social Organizer, Extension Agent and community members.</td>
<td>Identification of vulnerable households especially the poor and female-headed households in order to assist with poverty alleviation and enhance the food security situation of these households.</td>
</tr>
<tr>
<td></td>
<td>Step 5: Participatory Strategy for Pest Management</td>
<td>Representatives of potential beneficiaries.</td>
<td>Identification of the constraints of vulnerable households to participation in ARMP activities and the improvement and refinement of a strategy to encourage their participation.</td>
</tr>
<tr>
<td></td>
<td>Step 6: Terms of Partnerships</td>
<td>PMU</td>
<td>Identification of vulnerable households especially the poor and female-headed households in order to assist with poverty alleviation and enhance the food security situation of these households.</td>
</tr>
<tr>
<td></td>
<td>Step 7: Follow-up visits</td>
<td>PMU and potential beneficiaries</td>
<td>Identification of the constraints of vulnerable households to participation in ARMP activities and the improvement and refinement of a strategy to encourage their participation.</td>
</tr>
<tr>
<td></td>
<td>Step 8: Facilitating the participation of vulnerable households</td>
<td>Social Organizer</td>
<td>Identification of the constraints of vulnerable households to participation in ARMP activities and the improvement and refinement of a strategy to encourage their participation.</td>
</tr>
</tbody>
</table>

### C. Spring Rehabilitation

**Recommended Approach**

*Step 1: Initial Village Contact:* The Social Organizer will visit a village and contact the village elders, the *Mukhtar* if one is present in the village, the local mosque an existing voluntary society or co-operative and outline the objectives of the programme. The help of one or all of these contact persons and groups will be enlisted as appropriate for information dissemination about the programme. ARMP staff will brief these contact groups about the objectives of the project and request a meeting with as many of the villagers as can be collected at a future date. A time and date is fixed for a general village meeting in which the contacted persons agree to do their best to ensure the participation of the maximum number of inhabitants in the village.

*Step 2: Technical & Social Appraisal:* ARMP staff may continue to undertake the Technical Appraisal in the manner that they have undertaken in the past with the collaboration of the Water Authority. However, there is need to involve community representatives in the Technical Appraisal of the springs. Each time a spring has been identified as needing rehabilitation, a one-page information sheet will be filled to determine the number of households who will benefit from the rehabilitation of the spring. This information should be filled on the site with the help of the knowledgeable local population and reconfirmed with any government records. This will help to determine the economic and social feasibility of the investment.
Step 3: Community Participation and Ownership: ARMP Extension and Engineering staff visit the village on the appointed time and date and explain the objectives of project to the potential beneficiaries. A majority of households who are likely to benefit from spring rehabilitation must participate in the process. ARMP explains the terms of partnership to the community and explains that they will be only willing to work in their village if the village agrees to these Terms of Partnership. The village can be given an opportunity to consider this offer in case they are unwilling to make an immediate commitment and instructed to contact the ARMP staff when and if they are ready to co-operate on the suggested terms. Sometimes, more than one meeting maybe necessary in one village. In case representatives of the village contact ARMP staff and indicate their willingness to accept the Terms of Partnership the project will proceed further. Otherwise, ARMP will not undertake spring rehabilitation in the village. In case the villagers are willing to participate in the spring rehabilitation works, ARMP will hold a meeting with a majority of the beneficiaries and ask them to nominate one or two representatives who will assist in the design of the project and undertake the task of co-ordination with ARMP and assist in the supervision of the work of the contractor. The community representatives will also be involved in the selection of the contractor. The community may be given the option to undertake the work of spring rehabilitation itself and be paid the estimated cost in instalments linked to progress on the work. Prior to the payment of the contractor, ARMP will ensure that the work has been completed satisfactorily and that the representatives of the community are satisfied with the work.

Terms of Partnership for Spring Rehabilitation

The expected beneficiaries from the spring rehabilitation works will agree to provide unskilled labour and any local materials required. The exemption of some of the households from the provision of labour and local materials will be a matter that will be left to the discretion of the local community. ARMP will be interested in recovering the unskilled labour and local materials as specified.

The beneficiaries will nominate two or three representatives to help the ARMP engineering staff in preparing the design of the spring and determine the pathways of the water channels in a manner that adheres to the existing water rights and water sharing arrangements.

The beneficiaries must provide the cost of any improvements or modifications that exceed the normal rehabilitation requirements of a spring as determined by the engineering staff of ARMP.

The beneficiaries will nominate two or three representatives who will assist in the supervision of the work of the contractor.

Communities willing to contribute a greater share of the labour cost and local materials will get priority in the selection of their spring for rehabilitation.

| Table 3 |
| Summary of Community Participation Matrix |
| Spring Rehabilitation |

<table>
<thead>
<tr>
<th>Activity</th>
<th>Step Wise Actions</th>
<th>Responsibility</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Rehabilitation</td>
<td>Step 1: Initial Village Contact</td>
<td>Social Organizer</td>
<td>To make the spring rehabilitation programme a demand driven programme in which interested communities compete with each other to bid for project support by their willingness to contribute to the project cost.</td>
</tr>
<tr>
<td></td>
<td>Step 2: Technical &amp; Social Appraisal</td>
<td>Engineering Staff and Social Organizer and Potential Beneficiaries</td>
<td>Better targeting of villages with a greater reliance on agriculture incomes to ensure that the investments made in the development of the irrigation infrastructure by the project will be sustained and will result in enhanced</td>
</tr>
<tr>
<td></td>
<td>Step 3: Community Participation and Ownership</td>
<td>Potential beneficiaries Social Organizer</td>
<td></td>
</tr>
</tbody>
</table>

62
Engineering Staff
PMU

agriculture production.

To build ownership of project investments by requiring that beneficiary households contribute to the cost of the project through supply of labour and local materials.

To assist ARMP in designing the spring rehabilitation works and ensure that the rehabilitation of the water channel is undertaken in a manner which respects the traditional water sharing rights prevailing in each village.

D. Mini-Dams and Hafir Construction

Recommended Approach

Step 1: Initial Request & Technical Appraisal: A request is submitted, as now, to the Director of Agriculture for the construction of a mini-dam or Hafir after which ARMP staff undertake the Technical Appraisal in the manner that they have undertaken in the past with the collaboration of the Water Authority.

Step 2: Economic and Social Appraisal: Each time a site has been identified as appropriate from the technical standpoint, a one-page information sheet will be filled to determine the number of households who will benefit from the mini-dam and Hafir including the livestock ownership pattern in the village. Estimates of the number of Bedouin and nomadic herders will also be attempted including an estimation of current migration routes and livestock ownership patterns. This will help to determine the economic feasibility of the investment. This information can be obtained from the government sources to begin with but it must be confirmed on-site by the villagers living in the settled village nearby, nomadic settlers or the Bedouin population. ARMP Engineering Staff will visit the proposed site for the mini-dam or hafir and visit the nearest settled village or the Bedouin population living in tents nearby. In the village the staff will contact the village elders, the Mukhtar if one is present in the village, the local mosque, an existing voluntary society or co-operative and outline the objectives of the programme. The help of one or all of these contact persons and groups will be enlisted as appropriate for information dissemination about the programme. ARMP staff will brief these contact groups about the objectives of the project and conduct a preliminary social appraisal on the spot to determine whether the site is suitable from the perspective of potential beneficiaries and is appropriate keeping in mind the migration maps of intended beneficiaries. In case it is determined that the site is not suitable from the economic or social perspective another site will be selected and the above steps will be repeated. In case the nearby village or nomadic population confirms that the site is suitable, ARMP staff will request a meeting with as many of the villagers and the nomadic and Bedouin population as can be collected at a future date. A time and date will be fixed for a general meeting.

Step 3: Community Ownership: ARMP staff will visit the village on the appointed time and date and explain the objectives of the project to the potential beneficiaries. In case a majority of those present agree that the site is suitable and that the mini-dam or Hafir should be made ARMP will ask the beneficiaries to nominate representatives who will assist in the design of the project and help with supervision. A representative from MIWR will be present and will outline the role of each participating agency. MIWR will confirm their commitment to undertake the maintenance of these structures. Community ownership is established through their agreement on the location and their assistance in supervision of the scheme.
### Table 4
Summary of Community Participation Matrix
Mini-Dams and Hafirs

<table>
<thead>
<tr>
<th>Activity</th>
<th>Step Wise Actions</th>
<th>Responsibility</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini-Dams and Hafirs</td>
<td>Step 1: Initial Request &amp; Technical Appraisal</td>
<td>MIWR and Engineering Staff of ARMP</td>
<td>To assist ARMP in the identification of appropriate locations for the mini-dams and hafirs to ensure that these investments will be used by the intended beneficiaries.</td>
</tr>
<tr>
<td></td>
<td>Step 2: Economic and Social Appraisal</td>
<td>Social Organizer</td>
<td>To assist ARMP in evaluating the cost-benefit of the mini-dams dams and hafirs by determining the social catchment of these schemes and ensuring that there are sufficient number of beneficiaries in the migration routes in which these structures are located (See Annex on Nomadic Pastoralists).</td>
</tr>
<tr>
<td></td>
<td>Step 3: Community Ownership</td>
<td>Potential Beneficiaries</td>
<td>To assist ARMP in the design of the mini-dams and hafirs to ensure that the structures that are made conform to the requirements of the beneficiaries and are designed in a manner which will allow effective use by the people and their livestock.</td>
</tr>
</tbody>
</table>

### E. Women Promotion Activities

**Recommended Approach**

*Step 1: Initial Contact:* ARMP Women Extension staff visit a village and explain about the group formation and collective production and marketing activities. ARMP staff will brief these contact groups about the objectives of the project and request a meeting with as many of the women as can be collected at a future date. A time and date is fixed for a general village meeting in which the contacted persons agree to do their best to ensure the participation of the maximum number of inhabitants in the village.

*Step 2: Institutional Appraisal:* The WID staff of ARMP will determine the interest and capacity of local women to undertake production and marketing as a group in a village. In case women are interested, ARMP Staff will determine the existence of a local NGO, Society or Co-operative interested in assisting the women in this activity and facilitate the interaction and co-ordination between the two. ARMP will determine the manner in which it can facilitate and encourage this collaboration through the provision of technical assistance, training, other inputs, etc. While women would like to join in a group, formal or informal, for procurement of production inputs, obtaining technical guidance and for marketing of products, everybody would like to keep the actual production process to herself and expect to be compensated according to her own labour and volume of output. As such, the women will be responsible for arrangements among themselves regarding the sharing of profits according to produce.

*Step 3: Technical Appraisal:* ARMP will assist these women’s groups in the preparation of a proper feasibility study for the enterprise that the women would like to establish collectively with access to funds from the Agriculture Credit Corporation. Proper technical assistance will be provided for the determination of the feasibility and arrangements for marketing with an appropriate NGO like JOHUD, etc.

*Step 4: Terms of Partnership:* ARMP will provide technical assistance and equipment and materials for the establishment of village based production centres and link them to a district based production cum training centre. ARMP will sign an agreement with the women’s group that will specify the Terms of Partnership as indicated in the box below. Where possible, arrangements will be made with an NGO for collective marketing of the products made by women.
**Step 5: Access to Credit** A special credit window will be made available for women unable to access credit through existing credit windows of ACC. This credit would be in the form of individual loans with group liability or peer pressure substituting for salary deduction collateral, at least in the case of small loans to be covered by the proposed "Small Loans Risk Fund" (see Rural Financial Services Section).

**Step 6: Monitoring and Support** ARMP staff will continue the monitoring of these groups and provide continued support and assistance until the groups are able to work on their own

---

**Terms of Partnership for Collective Enterprise Development by Women’s Groups**

The Women’s Group will provide the space for a village based production centre and will undertake a commitment to work together.

ARMP will facilitate women in obtaining a loan for the purchase of equipment and materials for the selected enterprise and if possible provide women with some of the initial equipment as an investment in the women’s group. In case the women cease their enterprise within the life of the project the equipment will be withdrawn.

ARMP will provide women technical assistance by establishing a product brand name, production and printing of labels and provision of standardised bottles for marketing at cost.

ARMP will arrange for the collective marketing of the produce in a centralised marketing place at appropriate locations in Amman, Karak, through arrangements with NGOs for the purpose.

ARMP will assist the women’s group to be registered as a co-operative if required.

---

**Table 5**

**Summary of Community Participation Matrix**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Step Wise Actions</th>
<th>Responsibility</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women in Development Programme</td>
<td>Step 1: Initial Contact</td>
<td>Social Organizer</td>
<td>To assist in the establishment of a sustainable system for helping women increase their productivity and incomes.</td>
</tr>
<tr>
<td></td>
<td>Step 2: Institutional Appraisal</td>
<td>Women in Development, Social Organizer and NGOs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Step 3: Technical Appraisal</td>
<td>WID Staff, Technical Assistance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Step 4: Terms of Partnership</td>
<td>ACC, Potential Beneficiaries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Step 5: Access to Credit</td>
<td>PMU, Women’s Group</td>
<td>To assist women in achieving economies of scale in the production and marketing of produce made by them.</td>
</tr>
<tr>
<td></td>
<td>Step 6: Monitoring and Support</td>
<td>NGO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACC, NGO, Women’s Groups</td>
<td>To assist poor women in enhancing their access to credit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WID Staff</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 4

LIST OF PEOPLE AND PLACES VISITED

A - Amman

Ministry of Agriculture (MOA)
P. O. Box 2099, Amman, Jordan; Tel: 962-6-568-6151; Fax: 962-6-568-4705

Mr. Salim Al Akour. Director General, Projects Department
Mr. Suleiman Abadi. Head, Studies & Planning Section, Projects Dept.
Mr. Shabib Haddadin Studies & Planning Section, Projects Department
Ms. Besma El Manasir Studies & Planning Section, Projects Department
Mr. Mohammed Ali Rahahela Director, Agricultural Economics & Policy Dept
Mr. Abdella Shishan Head, Monitoring & Evaluation Section
Ms Barehan Bakri Monitoring & Evaluation Officer

Watershed Management Project
P. O. Box 92-62-38, Amman, Jordan; Tel: 962-6 – 535 - 9726; Fax: 962-6-568-0430
E-mail: Jweik@go.com.jo

Mr. Jorg H. Weik GTZ Technical Adviser Tel: 079-29007

Ministry of Water Resources and Irrigation (MWRI)
Tel: 962-6-568-0100; 962-6-568-9464; Fax: 962-6-568-9916

Mr. Yousef Taha Head, Spring Development Division

National Centre for Agricultural Research & Technology Transfer (NCARTT)
P.O. Box 639, Baqa, 19381; Tel: 962-6-472-6680; Fax 472-6099; e-mail: Director@ncartt.gov.jo

Dr. Eng. Abdel Nabi Fardous Director General

United Nations Development Programme (UNDP)
P.O. Box 921375; Amman, 11180. Tel: 962-6-566-8171; Fax: 962-6-567-6582

Mr. Khalid Jenini Sr. Administrative & Finance Officer (Ext 207)

CARE International - Jordan
P. O. Box 5062, Amman 11181 Jordan; Tel: 962-6-552-7921; Fax: 962-6-552-7951
E-mail: care.Jordan@firstnet.com.jo

Mr. Anis K. Tarabey Project Manager (Mobile:79-661298
Mr. Khalid Odetallah Trainer

Jordanian Consulting Engineering Company
P.O. Box 926963 Amman, 11110; Tel 926-6-560-6150; Fax 569-6923; e-mail jce@go.com.jo

Mr. Issa Abu Taha Engineering Geologist
B. Karak

Agricultural Resource Management Project (ARMP)
Tel: 962-03-23 22813; Fax: 962-3-394813

Mr. Jamil Yassin Jaafreh  Project Manager/ Co-ordinator
Mr. Maamoun A. Soleiman El Azaeleh  Head, Monitoring & Evaluation Section
Mr. Hassan Ed Domour  Civil Engineer

Agricultural Directorate
Tel: 962-3-386-316;  Fax: 962-3-386-465

Mr. Khalid Nawaiseh  Director

Zat-Raas Municipality
Mr. Salmon Bakhit El Jaaf  Mayor

C. Tafila

Agricultural Resource Management Project (ARMP)
Tel: 962-3-224-1226  Fax: 962-3-224-1226

Jamal Oran  Head, Field Unit

Ministry of Agriculture
Socio-economic Survey Team Members
Mr. Mohammed Ali Rahahela  Director, Agricultural Economics & Policy Dept
Ms. Besma El Manasir  Studies & Planning Section, Projects Department
Ms Barehan Bakri  Monitoring & Evaluation Officer