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Rehabilitated desert farm at Nekel in the project area of the
IFAD Agricultural Resources Management Project
Photo by Frank Butcher, IFAD Consultant
The Hashemite Kingdom of Jordan  
Agricultural Resources Management Project, Loan no. 392-JO  
Interim Evaluation

Table of Contents

Abbreviations and Acronyms iii  
Map v  
Agreement at Completion Point vii  
Executive Summary xvii

I. INTRODUCTION 1  
A. Background to the Evaluation 1  
B. Approach and Methodology 1

II. MAIN DESIGN FEATURES 2  
A. Project Rationale and Strategy 2  
B. Project Area and Target Group 3  
C. Goals, Objectives and Components 4  
D. Implementation Partners and Arrangements 5  
E. Design Changes during Implementation 5

III. SUMMARY IMPLEMENTATION RESULTS 7  
A. Natural Resource Management 7  
B. Agricultural Development 9  
C. Credit 10  
D. Women’s Development Programme 11  
E. Institutional Strengthening 13  
F. Coordination and Management 13

IV. PERFORMANCE OF THE PROJECT 15  
A. Relevance of Objectives 15  
B. Effectiveness 16  
C. Efficiency 17

V. RURAL POVERTY IMPACT 17  
A. Impact on Physical and Financial Assets 18  
B. Impact on Human Assets 19  
C. Impact on Social Capital and Empowerment 19  
D. Impact on Food Security 20  
E. Impact on the Environment and Communal Resource Base 20  
F. Impact on Institutions, Policies and the Regulatory Framework 20  
G. Impacts on Gender 21  
H. Sustainability 21  
I. Innovation and Scaling up 22  
J. Other Poverty Impacts 23
K. Overall Impact Assessment 24

VI. PERFORMANCE OF THE PARTNERS 24

A. Performance of IFAD 24
B. Performance of the Cooperating Institution 25
C. Government and its Agencies 26
D. Performance of Non-Government and Community Based Organizations 26

VII. OVERALL ASSESSMENT AND CONCLUSIONS 26

A. Participation 26
B. SWC and Agriculture 29
C. Credit 29
D. Women’s Programme 30
E. Institutional Strengthening 30
F. Coordination and Management 31

VIII. INSIGHTS AND RECOMMENDATIONS 31

A. Participation 31
B. Water 32
C. Agricultural Extension 34
D. Credit 35
E. Women’s Programme 37
F. Project Implementation 38

APPENDICES 41

Appendix 1: Approach Paper 43
Appendix 2: a) Methodological Framework for Project Evaluation 48
b) Summary Evaluation Assessments 49
Appendix 3: Impact and Effectiveness Matrices 50
Appendix 4: The Use of Sanadiq for Channelling Credit Funds 52

ANNEXES*

Annex 1. Resource Management and Agricultural Development
Annex 2. Rural Financial Services
Annex 3. The Women’s Development Programme
Annex 4. Economic Analysis

*All Annexes are available from IFAD’s Office of Evaluation – Tel: +39 06 5459 2048 or email: evaluation@ifad.org
Exchange Rate

(April 2004)

Local Currency = Jordanian Dinar (JOD)
USD 1.00 = 0.70 JOD
1.00 JOD = 1.4 USD

Measures

1 dunum (du) = 0.1 ha

Abbreviations and Acronyms

ACC Agricultural Credit Corporation
ACP Agreement at Completion Point
AFESD Arab Fund for Economic and Social Development
ARMP Agricultural Resources Management Project
AWPB Annual Work Programme and Budget
CBO Community Based Organization
CI Cooperating Institution
COSOP Country Strategic Opportunities Paper
ECP Extended Cooperation Programme
ERR Economic Rate of Return
FDA Field Directorates of Agriculture
GDP Gross Domestic Product
GOJ Government of Jordan
ICARDA International Centre for Agricultural Research in Dry Areas
IE Interim Evaluation
IGA Income Generating Activity
JOD Jordanian Dinar
MIWR Ministry of Irrigation and Water Resources
MOA Ministry of Agriculture
MOP Ministry of Planning
MTE Mid Term Evaluation
NCARTT National Centre for Agricultural Research and Technological Transfer
NGO Non Governmental Organization
PCC Project Coordinating Committee
PD Project Department
PMU Project Management Unit
PRA Participatory Rural Appraisal
PSC Permanent Steering Committee
RACC Regional Agricultural Coordination Committee
RRA Rapid Rural Appraisal
SWC Soil and Water Conservation
TA Technical Assistance
TORs Terms of Reference
WDP Women’s Development Programme
WUA Water Users Association
The Hashemite Kingdom of Jordan
Agricultural Resources Management Project
Interim Evaluation

Agreement at Completion Point¹

1. The Core Learning Partnership and the Users of the Evaluation

1. This Agreement at Completion Point (ACP) is concerned with identifying lessons from the implementation experience of the first phase of the Agricultural Resources Management Project (ARMP) which are applicable to future interventions and registering stakeholders commitment to their implementation. This will be facilitated through the Core Learning Partnership (CLP) which serves as a platform for effective transfer of knowledge and learning generated through evaluation. IFAD’s Evaluation Policy² defines the main objectives of the ACP as “to clarify and deepen the understanding of evaluation recommendations, document those that are found acceptable and feasible and those that are not, and eventually generate a response by the stakeholders on how they intend to act upon them within the framework of an action plan that assigns responsibilities and deadlines.” The role of the Office of Evaluation (OE) is to facilitate this process leading to the conclusion of such an agreement.

2. As agreed during the evaluation process, members of the CLP include representatives from the Ministry of Agriculture, Ministry of Planning, Agricultural Credit Corporation (ACC), the Arab Fund for Economic and Social Development (AFESD) and project and IFAD staff.

2. The Main Evaluation Findings³

➢ Performance of the Project

3. Relevance. The evaluation concluded that ARMP’s soil and water conservation (SWC) and agricultural development objectives remained very relevant to the intended target groups. This conclusion was derived from considerations of the impacts on poverty presently being achieved, an appreciation of the poverty situation prevailing in Karak and Tafila, and the Government of Jordan’s (GOJ) agricultural and rural development policies. The success of the project has in many ways just highlighted the considerable potential which still exists in the two governorates.

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¹ This agreement reflects an understanding among the key partners to adopt and implement recommendations stemming from the evaluation. The agreement was formulated in consultation with the members of the Core Learning Partnership (CLP). The latter comprised Prof. Awni Taimeh, Secretary General, Ministry of Agriculture; Mr Radi A. Tarawneh, Director, Productive Projects Dept, Ministry of Agriculture; Mr Mahmoud Choulen, Director of Projects, Ministry of Planning; Mr Mousa Al Abbadi, Director, Dept. of Projects, Ministry of Agriculture; Mr Jihad Abu Mushrif, Director of International Cooperation; Mr Nimr El Nabulsi, Director General, Agricultural Credit Corporation (ACC); Eng. Reem Qura’n, Assistant Director General, Public and International Affairs, ACC; Mr Jamil Jaafreh, Project Director; Representative from CARE International, Jordan; Dr Mervat Badawi, Director, Technical Department, AFESD, Kuwait; Dr Abdelhamid Abdouli, Country Portfolio Manager, Near East and North Africa Region, IFAD; Dr Mona Bishay, Deputy Director, Office of Evaluation, IFAD, in charge of the evaluation. OE facilitated the process.

² As approved by the Executive Board, April 2003. Quote from paragraph 46.

³ The evaluation methodology followed uses three composite evaluation criteria: project performance (composed of relevance, effectiveness and efficiency) rural poverty impact (composed of six impact domains, sustainability, innovations and gender equality) and performance of partners (including IFAD, implementing agencies, and the cooperating institution). The ratings used to assess performance using these criteria are high (4), substantial (3), modest (2) and negligible (1). For the sustainability criterion the rating used is highly likely (4), likely (3), unlikely (2) and highly unlikely (1).
4. **Effectiveness.** Overall, the evaluation found that the objectives of the project had been significantly achieved. Major improvements have been recorded in soil and water conservation, agriculture, and skills levels. By upgrading and protecting the natural resource base, through technical support to farmers and by providing credit and skill development programmes (especially for women) the vulnerability of farmers, herders and rural women who have been reached by the project has been decreased. The re-allocation of targets and resources after the Mid-term Evaluation (MTE) improved the potential effectiveness of the project by better aligning targets and funds with beneficiary demands and project capacity. The only possible detracting factor has been the difficulties in better targeting the interventions to the poorest. The evaluation concluded that the performance of the project in terms of its implementation effectiveness was substantial.

5. **Efficiency.** The economic rate of return (ERR) projected at Appraisal was 10.6% based on improved cropping on private land areas which had been conserved. The evaluation considered that this under-estimated the overall ERR for the project as it ignored benefits for herders on State land and improved incomes from the women’s credit programme. The evaluation therefore not only re-calculated the cropping benefits, but estimated these additional benefits as well. When all the productive activities were combined, the revised ERR was 34.8 percent. This is a very impressive result, and indicates that from GOJ’s perspective borrowing for ARMP development activities was well worthwhile and should lead to increasing economic returns. Improvements to physical resources, enhanced and rejuvenated agricultural production, and promotion of off-farm income generation have also proved positive for family incomes: the evaluation found that the likely increases to farm household incomes indicated in the Appraisal (between 30 to 400%) were probably correct. Implementation efficiency of the project was therefore found to be high.

- **Impact of the Project on Rural Poverty**

6. Changes in the natural resource base have largely been positive as water storage facilities constructed by the project have resulted in improved pasture, and the area of protected and stabilised soil on private farms has increased as a result of the SWC measures and the expansion of tree cropping. Farmers either adopting SWC activities or benefiting from spring rehabilitation have seen their physical assets improved, probably best illustrated by the increased values now placed on their holdings. However, there is some concern that the project-sponsored cisterns for supplementary irrigation requirements do not adequately serve the new areas planted to olives and unintentionally the effect has probably been to add to the depletion of what is already a severely depleted aquifer.

7. Positive impacts on household and financial assets have also been reported by beneficiaries as a result of the Income Generating Activities (IGA) programme, and mission calculations indicate that these impacts are significant. Access to markets - an important factor in poverty reduction - has improved since the beginning of the project as a result of beneficiary (and other) demand, although this was not part of the project design. All beneficiaries have either received skills training, or have profited from increased access to information via the project staff.

8. As a result of high demand, credit allocations for women’s IGAs, through ACC credit operations, have been significantly increased (which has also had the effect of increasing the number of women benefiting from skills training). Overall, women’s access to project benefits has been good and women beneficiaries confirmed that they felt more empowered in the household as a result of being income earners, particularly those that had no previous employment, but benefited from ACC lending. The credit experience has led to ACC being willing to modify its lending terms and conditions somewhat, although the changes made are small, and still do not mean that the poorest and disadvantaged will be eligible for credit.

9. Although the design called for participatory approaches, in practice these have not been adopted. Because of this lack of participation, the development of social capital and local self-help has not been an outcome of ARMP, neither has the project made any contributions to building local capacities for community empowerment. In addition, the evaluation concluded that beneficiaries of the SWC,
farm development and credit programmes were mostly from the relatively better off bracket, therefore, although the project has had a positive livelihood on the poor in general, the poorest has not been reached as expected.

10. **Sustainability.** The IE concluded that the project SWC interventions would largely be sustainable after project closure, as the on-farm structures require little maintenance. By comparison, there are significant maintenance requirements for the mini-dams, hafiras, and check dams on State land, and it is probable that the long term maintenance of these structures will remain a government responsibility, with little possibility of cost recovery from users. Although ACC has not established a specific revolving fund it has confirmed its commitment to continue to provide loans by going beyond the initial allocations for credit. The evaluation estimated that the IGAs undertaken were in general profitable for the borrowers, and hence will probably be continued.

11. **Innovation and Scaling up.** The deep pruning of old olives introduced a contextual innovation, though not totally unknown to Jordan. It has introduced a new technique into traditional practices and has proved to be very beneficial. This technique could be more widely demonstrated and replicated wherever it is appropriate. To an extent, the introduction of check dams was also innovative, even though this structure was not continued by the project. The project has already provided training to many women who could not take loans because they could not meet ACC’s conditions. Expansion of the very successful IGA programme could take place if these women could be reached by an appropriate credit mechanism: this is an opportunity for scaling up to occur within the project area, at little additional cost.

12. Overall, the impact of the project on Rural Poverty was found substantial.

   ➢ **Performance of the Partners**

13. **IFAD and the Cooperating Institution (CI).** The evaluation concluded that whilst the intentions and relevance of the interventions could be rated very highly, there were some aspects of the design which were not satisfactory – especially the targeting criteria and the practical aspects of the implementation approach for community involvement. The arrangements for the involvement of ACC also did not offer any progress in terms of enhancing the outreach of credit to the poor. However, overall IFAD has facilitated a design which “did the right things”. In terms of implementation, the evaluation agreed with the Project Management Unit’s (PMU) assessment that both IFAD and the CI had generally provided good support (although in the case of the CI this was mostly in fiduciary aspects).

14. **Government and its Agencies.** The arrangements made by the Ministry of Agriculture (MOA) for project implementation have proved very satisfactory. The only difficulties experienced during implementation relating to the reluctance to change operational arrangements to meet the implementation mechanisms as specified in the loan agreement (e.g. participation) and the reluctance to use loan funds for Technical Assistance (TA) or for contracting skills through Non-Governmental Organizations (NGOs) etc. The PMU has proved a very effective mechanism for day-to-day implementation, which has been demonstrated not only by the physical achievements of the project, but by the very pragmatic way that problems have been overcome and the decisive management involved in the modification of project targets at mid-term. The ACC has been an effective partner in terms of disseminating the credit funds, but cannot be said to have contributed much to the achievement of the project’s poverty objectives.

3. **Evaluation Insights**

   ➢ **Water Management**

15. The acute scarcity of water in Jordan has been given particular emphasis in the present Country Strategic Opportunity Paper (COSOP), yet the evaluation came to the conclusion that whilst ARMP
had contributed to water conservation, it had not actually focussed sufficiently on the crucial aspect of water management. Improving the livelihoods of the rural population depends largely on intensifying agricultural production and productivity, which requires optimising the use of water. Water, rather than land, was (and is) the limiting factor. To address this issue, the evaluation has made a series of recommendations (see below) covering the matching of water conservation to land development, the size of cisterns and the promotion of water user associations. For future interventions, the evaluation concluded that designs need to place much greater emphasis on water management.

➢ Innovation in Credit

16. As designed the credit programme in ARMP reflected a somewhat narrow view of the role of credit in rural development. In considering a second phase of ARMP, as happened in subsequent projects (e.g. Yarmuk), the approach should shift more towards the provision of rural financial services, following IFAD’s policy guidelines (which had not been developed at the time of the original design of ARMP). These state clearly that to maximise impact and reach of the rural poor a wider spectrum of financial services (e.g. savings), lending modalities and partners engagement should be implemented. While ACC possibilities for being innovative in phase I to optimise financial services to the poor were limited, circumstances have now changed in that there is now much stronger GOJ and ACC’s commitment to addressing the issues of poverty in the rural areas through credit and that IFAD has clear guidelines in designing its intervention in this field.

17. ACC has been an effective partner in disseminating credit funds in ARMP. It must continue to have a key role in any MOA and IFAD future development strategy, as it remains the only formal organisation able to provide financial services to producers in the rural areas. The need, however, is to identify the mechanisms through which the role of ACC can become more broad based, able to reach out to those individuals and groups who need most ACC services in order to enable them to overcome their poverty. Despite the achievements and successes in ARMP, the limitations demonstrated show that there is still some way to go. This will require innovation in providing financial services to the poor, and this should be a feature of the design of future interventions. Recommendations to address these aspects have been made (see below).

➢ Women’s Programme

18. The project design included not only the women’s programme, but specific references for inclusion of women-headed households in the SWC and agricultural components. Overall, therefore, women’s access to project benefits has been good and approximately one half of project beneficiaries are women. The IGA programme has proved to be impressively successful in Phase I, demonstrating a useful mechanism for increasing family household incomes. Even where IGAs have not actually been started, the training provided has almost certainly been beneficial, possibly representing a further stream of benefits which the project might do well to assess. The present Women’s Development Programme (WDP) provides a building block for the future, but should not just be copied. Rather, the need is to update the approach so that gender is further mainstreamed to the extent possible under local circumstances, and weaknesses identified are addressed. Recommendations have been made to address these issues (see below).

➢ Decentralisation

19. The project activities have tended to substitute for the regular roles of the staff of the Field Directorate of Agriculture (FDAs). Whilst this may have come about because the project has more funding and is able to promise more to potential beneficiaries, it is not sustainable. In the second phase project activities should temporarily complement the activities of the FDAs, but a gradual hand over strategy should be designed and implemented. The evaluation concluded that consideration should be given to additional support for the local extension services, as well as a formalised handover process by which developed areas become the responsibility of the FDAs. Further, the ongoing involvement of the Regional Agricultural Coordination Committee (RACC) needs to be strengthened,
so that relevant decisions about the project’s day-to-day work programme can be gradually taken by the agencies most closely involved. Both these aspects would serve to reinforce the decentralised nature of the project’s activities, help ensure sustainability and achieve the original intentions expressed in the design.

4. **Recommendations Agreed by Partners**

**Participation**

20. In a future second phase of ARMP the project could make a significant contribution to MOA by assisting the Ministry to develop participatory approaches in its poverty alleviation and agricultural development efforts. There is a need to adopt a strategic approach to participation and to mainstream it at all levels within the Ministry. In doing so the following steps have been agreed to incorporate in the design of the second phase:

- IFAD should in future assist MOA to mainstream participatory approaches throughout the Ministry. This might include funding a series of workshops and a sensitisation campaign (similar to that conducted for establishing the Gender and Development unit), and providing TA for training trainers in the Training Department of the MOA.

- A study should be undertaken within the designated project areas that analyses the arrangements for and impacts of traditional (village development committees) and more recent community associations and identifies mechanisms that have proved effective for the mobilisation and participation of rural poor communities.

- Training should be provided for the appropriate PMU staff in community development and group formation, including study visits to other IFAD projects where community participation and organisation have been successful.

- A specialised and experienced NGO should be contracted to backstop, train and monitor the implementation of the community participatory approach.

- Education should be provided for beneficiaries in community participation, and beneficiaries should be assisted to form village development committees. Consideration should be given to the provision of community development funds.

- Steps should be taken to ensure beneficiary participation as a feature of the monitoring of project activities.

| Implementation: | IFAD’s NENA regional division and MOA in design and implementation of phase II. |

**Water**

21. **Supplementary Irrigation Requirements.** Most purchased water in the project area comes from private wells, all of which appear to tap in to the same aquifer (B2/A7) in the Dead Sea Basin. This aquifer is already described by the Water Authority as being “severely depleted” and any additional abstraction will accelerate this depletion: this is totally contrary to the conservation objectives of the project. A major step required to address this problem is to ensure that the capacities of the cisterns provided are adequate. Whilst this is recognised by the project, the evaluation considered that the proposals to address the shortfall were inadequate, and should be re-visited. It was therefore agreed that:
The design principle adopted in the second phase should be to ensure that farmers’ supplementary irrigation requirements can, in a normal year, be met by harvested run-off water only.

The project to start taking steps to estimate cistern capacity based on more precise water-requirement information.

**Implementation**: IFAD’s NENA regional division and MOA.

22. **Water-use efficiency.** The evaluation found that there was considerable variation between farmers in the frequency of irrigation and in the amounts of water applied, suggesting that both over-irrigation and under-irrigation may occur. In the context of a project in a low-rainfall area farmers, irrespective of their level of experience (and it should be borne in mind that some of the project’s beneficiaries come from non-agricultural backgrounds), should have access to clear guidelines and recommendations regarding efficient water-use practices. At present, area-specific recommendations do not appear to be readily available to growers. It was therefore agreed that:

- The project should ensure that all growers are informed about and receive guidelines for supplementary irrigation practices for olives and other fruit trees, so as to ensure an optimum economic balance between yield and water use. These guidelines should be quantified for trees at different stages of maturity on the various soils in the project area, in a normal season.

- If appropriate guidelines, applicable to project circumstances, do not exist, or if they need to be refined, the project should enlist the collaboration of the National Centre for Agricultural Research and Technological Transfer (NCARTT) specifically to formulate and develop them.

**Implementation**: FAD’s NENA regional division and MOA in the design and implementation of phase II.

23. **Water User Associations (WUAs).** An essential aspect of water management is for local community groups to take responsibility for the management of improved schemes. However, the evaluation observed considerable confusion amongst groups concerning members’ responsibilities, obligations and benefits. Both to protect the investments made in construction and to ensure the proper maintenance of the schemes, there is a need to establish properly constituted WUAs. These Associations facilitate community management of a common resource and can also provide valuable “entry points” in terms of greater participation from the community. Such an approach is worth pursuing in future. It is therefore agreed that:

- More attention should be paid and resources allocated to the formation and structure of water-user groups (WUAs) on communal irrigation schemes that have benefited or will benefit from project support in the form of spring and canal rehabilitation.

**Implementation**: IFAD’s NENA regional division and MOA in design and implementation of phase II.

**Handover Strategy**

24. Jordan’s agricultural extension service is seriously under-staffed and its effectiveness is consequently compromised. This presents a problem in terms of the continuing support required by farmers in order to fully realise the development potential of improved land and water resources. At the moment the extension agents working with the project appear to have to continue their activities (after the development phase has been completed) with an ever-growing portfolio of clients.
Similarly, the arrangements for maintenance of the structures developed by the project on State land are unclear, and the project seems to accept some responsibility in this respect. There is a need to address the handover process of completed conservation areas on private land for regular support by extension agents within the FDAs, and the handover of structures to Government agencies or community groups for maintenance. There is also a need to ensure that the Extension Services can cope with the additional loads after completion of the development phase. It was therefore agreed that:

- Consideration be given to formalising handover strategy and procedures for (i) completed areas developed through the project to the respective Directorates of Agriculture, and (ii) structures developed to appropriate agencies for their management and maintenance.

- Consideration should be given to providing support from project funds for the extension agents in the FDAs concerned with the project.

- Further policy dialogue between IFAD and MOA to identify the extent to which the current status of the extension service shortfall could affect the achievement of wider poverty reduction aims in the rural areas and agree on medium term measures to address this issue.

| Implementation | IFAD’s NENA regional division and MOA in design and implementation of phase II. |

**Credit**

25. Notwithstanding the significant achievements of the credit activities under ACC management in phase I, it was agreed that in future:

- A minimum of 10-15% of credit allocations should be designated to test pilots of alternative mechanisms of group credit provision suitable to the socio-economic conditions of the rural poor. This should be administered by ACC, but channelled through appropriate local level rural organisations, for example, sanadiq if found suitable. Advantage should be taken of assessing successful Regional experience in this regard, for example in Syria. The new mechanism should be created in the project area for the specific purpose of providing loans to the most disadvantaged households who cannot meet the present collateral requirements. The arrangements should be established by the project’s Credit Unit, and should operate under the joint supervision of the PMU and the ACC.

- Consideration should be given to establishing a Credit Unit within the project organisation. Such unit is needed to ensure on-going and effective coordination, as well as to endow future projects with ‘credit expertise’ so that they might play a more effective role with regard to credit outreach and monitoring of IGAs. If such a Unit is established the project should meet the costs of a full time officer seconded from ACC to head this Unit, plus training for all the Extension Officers within the project in assessing credit needs.

- In order to reinforce the overall participatory approach in the project, the credit aspects should, in future, include the possibility of utilising the services of a prominent NGO in the field of micro-finance to provide the skills which are not currently available\(^4\), such as the institutional arrangements for establishing credit groups.

- ACC should initiate means of establishing a clear and consistent relationship between the size and duration of loans on the one hand, and the purposes for which the credit is to be used on the other.

\(^4\) For an overview of NGOs in Jordan active in micro-finance see “Restructuring of Agricultural Development Banks: the Case of the ACC in Jordan” Michael T Marx, April 2003.
Implementation: IFAD’s NENA regional division, MOA and ACC in the design and implementation of phase II.

Women’s Programme

26. The following recommendations were agreed:

- The design of future interventions should be based on the gender mainstreaming approach which is now a core and required aspect of IFAD interventions and support, although it is recognised that this must be adapted to local cultural circumstances.

- The range of IGAs should be expanded after feasibility and marketing studies which seek to identify products that have market demand and are financially viable. These studies should be wide ranging and include small-scale group production. They will probably require some form of TA, both for the studies and to continue to backstop the activities identified.

- Future interventions should give more emphasis to capacity building for beneficiaries. This would include training in the organization of collective working, administration and marketing skills.

- Future interventions should consider funding women’s centres. The necessity for women’s centres is twofold: firstly, they would be more cost efficient for poor women working collectively by sharing equipment, supplies and storage space, rather than each working separately (e.g. from home where space and resources are limited for larger scale production). Secondly, women’s centres would assist in institutionalising women’s groups.

- An experienced local NGO should be contracted (i) to train WDP officers to apply participatory approaches methodically and (ii) to help establish women groups for small enterprises. This can be the same NGO contracted to assist with introducing participatory approaches (see under participation above).

Implementation: IFAD’s NENA regional division and MOA in design and implementation of phase II.

Institutional Strengthening

- An appropriate package of institutional strengthening should be included in future projects for the MOA, covering both the technical training requirements of beneficiaries and staff, and sufficient to allow for the sensitisation in, introduction of and adoption of the suggested participatory methods. In addition assurances should be sought that identified staff needs and planned training activities would be fully funded during implementation.

Implementation: IFAD’s NENA regional division and MOA in design and implementation of phase II.

Decentralisation

- The role of the Regional Agricultural Coordination Committee should be more clearly defined as an ongoing responsibility for the work programme of the project. This might, for example, involve the approval of all areas to be developed and quality control of the project’s construction activities.
Implementation: IFAD’s NENA regional division and MOA in design and implementation of phase II.

Project Implementation

- The project should seek to make wider use of the assistance available in other Departments of the MOA, both to address strategic issues (e.g., the marketing of olive oil) and to obtain technical support (e.g., with arranging training). In addition, care should be taken to link with the Ministry’s own M&E Department, in order to harmonise reporting on the overall progress of projects.

- Consideration should be given to the adoption of the M&E system devised for ARMP in a wider context; there is the potential to extend the methods used to many projects in the Region. With appropriate support ARMP could provide a local “centre of excellence” for training in M&E.

Implementation: - IFAD’s NENA regional division and MOA in design and implementation of phase II.

- IFAD’s NENA regional division in the design of other projects in the region.
I. BACKGROUND AND DESIGN

1. 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 project closed at the end of December 2003, and based on the successful implementation experience the Government of Jordan (GOJ) has requested a second phase of the project. The project was subject to a Mid-Term Evaluation (MTE) in 2000, hence the approach adopted for the Interim Evaluation (IE) was therefore to update the assessment of impacts and the changes that had occurred as a result of the MTE recommendations. In undertaking the evaluation, the field mission fully implemented the Methodological Framework for Project Evaluation (MFE) developed by the IFAD Office of Evaluation (OE) in 2002 and followed its rating system.

2. The overall goal of ARMP, within the GOJ strategies for the development of rainfed farming, was to improve the income stability of vulnerable, resource poor farmers in the two Governorates of Karak and Tafila by safeguarding and improving the productive potential of their natural resources and enhancing their returns to labour. This was to be achieved by arresting soil degradation and restoring soil fertility, promoting activities for women through credit and strengthening the capacity of the Ministry of Agriculture (MOA) both to implement these measures and to meet the technology needs of farmers. To realise these aims the project interventions were arranged in five components: Resource Management; Agricultural Development; Institutional Strengthening; Women’s Development; and Co-ordination and Management. At the time of design the estimated number of rural households living below the poverty line in the project area was estimated at about 7000. The total project cost was estimated at about USD 18.6 million, of which the IFAD loan provided about USD 12.8 million. The project had a seven year implementation period.

3. In 2000, after three years of implementation, the project management proposed to revise the targets in the resource management and agricultural development components. These proposals were endorsed by the MTE, and the re-allocations were approved in 2001. The revised targets did not change the nature of the project itself (and hence the objectives), but simply increased and re-balanced the targets on a demand-driven basis. In addition, significant changes were made to the categories for which credit was available: funds were switched from support for supplementary on-farm soil and water conservation (SWC) activities and land consolidation and moved to women’s Income Generating Activities (IGAs), where demand was proving to be very high.

II. IMPLEMENTATION RESULTS

4. Resource Management. At the time of the interim evaluation 81% of the revised target for soil and water conservation activities (7500 ha) had been achieved, covering 2700 farms. On-farm, the project had constructed 2871 cisterns of 30 m$^3$ capacity to conserve runoff and supply supplementary

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1 The Interim Evaluation Mission was composed of Mr Frank Butcher, Mission Leader and Institutions Specialist; Dr Mouna Hashem, Sociologist and Gender Specialist; Mr Swithun Goodbody, Natural Resources Management Specialist; Mr Omar Imady, Credit Specialist; Mr Sarath Mananwatte, Economist and Financial Analyst. Dr Mona Bishay, Deputy Director of the Office of Evaluation undertook the preparatory field mission, supervised the evaluation and led the process of presentation of the Aide Memoire in the Wrap-up Meeting.  
2 Methodological Framework for Project Evaluation (EC 2003/34/W.P.3)
irrigation needs. The cisterns have contributed very significantly to the expansion of the area under tree crops, especially olives, and have greatly improved the productivity of the crop. As well as other erosion control measures, such as gabions and terraces, the project has constructed almost 900 km of stonewalls to protect some 5,880 ha. Stone walls have proved the most popular activity with beneficiary farmers probably because an unintended benefit has been significant increases in land values. Off-farm, 29 rock-faced earth mini-dams and hafiras\(^3\) were completed between 1998 and 2003 (58% of the revised target), benefiting some 18 population centres, mainly in respect of livestock watering. The project has undertaken a programme of spring rehabilitation, which involves permanent protection of the source to prevent damage and contamination, and improvements to the canals which distribute the water downstream, benefiting numerous farmers who mostly have very small traditional olive groves. So far works have improved the utilisation of 69 springs (66% of the target), helping some 1,121 farmers.

5. **Agricultural Development.** New planting has taken place so far on about half the area which has been improved through SWC activities. The overwhelming majority of trees planted are olives (140,000) although about 5,000 pistachio seedlings have also been released from MOA nurseries. The programme of fruit tree rehabilitation has consisted of deep-pruning of old olive trees that had become unproductive, and providing one application of fertilizer. Initially this activity was unpopular with farmers until the benefits were demonstrated, at which point demand greatly increased. Olive rehabilitation normally takes place where springs and canals have been rehabilitated.

6. **Credit.** Loans have been provided through the Agricultural Credit Corporation (ACC) either for agricultural development or for women’s IGAs. At the time of the IE a total of 1,152 loans had been dispersed, of which 1,034 loans have been for women’s (260% of the initial target), hence, over 90% of the total loans, and 80% in terms of absolute value have been provided to women’s. Approximately 44% of loans taken by women for IGAs financed dairy processing (with sheep milk), whilst other activities have mostly centred on other forms of food processing. Overall, the loans appear to have been very profitable (more so than at the time of the MTE): the mission calculated that average annual profits were JOD 829 (USD 1,160) or 57% of average annual household incomes. The result of stringent lending conditions has been a high repayment rate (89%). By June 2002, 31% of resources allocated for the institutional strengthening for ACC had been utilized, but ACC remains reluctant to use these loan funds, arguing that they should be provided as a grant. This has meant that ACC’s outreach in the project area has not changed.

7. **Women’s Development Programme (WDP).** Despite insufficient staff numbers or external support, the WDP has evolved into a much bigger programme than expected. Three NGOs and two universities have been contracted to provide training for the beneficiaries, and by project completion, 343 training workshops had been conducted (89% of target), reaching approximately 2,526 women. This is most impressive. However, the mission concluded, in agreement with the MTE findings, that the majority of WDP beneficiaries were not drawn from the poorest groups. The WDP officers have found resistance to the concept of small enterprise groups, and none have been formed through ARMP. The mission concluded that the WDP staff neither had the appropriate skills nor did they have suitable training and support to introduce this concept.

8. **Institutional Strengthening.** The project has arranged a very comprehensive training programme for staff, which has been very useful and will have long term benefits. However, there has been reluctance to use loan funds for more innovative aspects of the project, including hiring NGOs to provide support in specific skills, and to undertake studies. The mission considered that this had

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3 Hafiras are reservoirs used for livestock.

4 Credit was not a separate component of ARMP, but was the major means of achieving project objectives. Credit activities were implemented by the Agricultural Credit Corporation (ACC), which is part of the MOA, through a subsidiary loan agreement.

5 This was the figure for end-June 2003.
curtailed the extent of potential benefits and the development of new capacities and more participatory approaches.

9. **Coordination and Management.** The IE considered that implementation arrangements for the project had generally been very satisfactory, with adequate coordination and management procedures. However, participatory approaches, aspects of community development and involvement and group formation have not been adopted, even after very strong recommendations made by the MTE and agreements reached in the ACP. This is unfortunate, as GOJ policies and MOA strategies now require exactly the sort of approaches described in the original design of ARMP.

III. **PROJECT PERFORMANCE**

10. **Relevance.** Overall, the mission considered that ARMP’s SWC and agricultural objectives remained very relevant to the intended target groups. This conclusion was derived partly from considerations of the impacts on poverty presently being achieved, a summary appreciation of the poverty situation prevailing in Karak and Tafila, and GOJ’s agricultural and rural development policies. If the credit activities had been implemented as designed, then their continuing relevance to the intended target groups would also be high. The success of the project has in many ways just highlighted the considerable potential which still exists in the two governorates. The relevance of objectives is rated as high (4).

11. **Effectiveness.** Overall, the mission concluded that the objectives of the project had been significantly achieved. Major improvements have been recorded in soil and water conservation, agriculture, and skills levels. The project completion report shows over 97% of physical targets achieved. By upgrading and protecting the natural resource base, through technical support to farmers and by providing credit and skill development programmes (especially for the women) the vulnerability of a section of the rural communities has been decreased. The re-allocation of targets and resources after the MTE improved the potential effectiveness of the project by better aligning targets and funds with beneficiary demands and project capacity. The mission concluded that the performance of the project in terms of its implementation effectiveness was high. The only detracting factor has been the lack of relative poverty of the groups that had been reached, which, it was further concluded, partly reflected the practical difficulties in targeting the interventions. The evaluation rated overall project effectiveness in achieving its objectives as substantial (3).

12. **Efficiency.** At appraisal, the incremental benefits were projected to be derived only from crop production, and the Economic Rate of Return (ERR) was estimated at 10.6%. The mission considered that this potentially underestimated the project benefits, as benefits are also derived from off-farm water storage structures, and the credit programme (through the promotion of IGAs). When all productive activities are combined, the Project’s revised ERR was calculated by the mission to be 34.8%. This is a very good result, (which is not unduly sensitive to price/cost changes) and indicates that borrowing for ARMP development activities is well worthwhile and should lead to increasing economic returns for Jordan. This would also suggest that the project has been efficiently implemented. Improvements to physical resources, enhanced and rejuvenated agricultural production, and promotion of off-farm income generation have also proved positive for family incomes: the likely increases to farm household incomes indicated in the Appraisal (between 30% to 400%) are probably correct. The evaluation rated the efficiency of the project as high (4).

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6 The evaluation methodology followed (see Appendix 2) uses three composite evaluation criteria: project performance (composed of relevance, effectiveness and efficiency) rural poverty impact (composed of six impact domains, sustainability, innovations and gender equality) and performance of partners (including IFAD, implementing agencies, and the cooperating institution). The ratings used to assess performance using these criteria are high (4), substantial (3), modest (2) and negligible (1). For the sustainability criterion the rating used is highly likely (4), likely (3), unlikely (2) and highly unlikely (1).
IV. RURAL POVERTY IMPACTS

13. Physical and Financial Assets. Households either adopting SWC activities or benefiting from spring rehabilitation have seen their physical assets improved, probably best illustrated by the increased values now placed on their holdings. Impacts on household and financial assets have been reported by beneficiaries as a result of the IGA programme, and mission calculations indicate that these impacts are significant. Approximately 1 800 households have been given improved access to financial services through the credit programme. These improvements are impressive and are considered sustainable. Access to markets - an important factor in poverty reduction - has improved since the beginning of the project, as a result of beneficiary (and other) demand. However, the mission concluded that beneficiaries of the SWC, farm development and credit programmes were mostly in the middle-income bracket (in the context of rural incomes), therefore, although the project has had an impact on assets, it had less impact on poverty than it might have had, if it had been able to target the poorest sector of the rural population. Nevertheless, the overall rating for this sub-criterion is high (4).

14. Human Assets. Access to potable water has improved either directly as irrigation facilities have been developed, or indirectly as a result of increased incomes. The project activities, by their nature, have resulted in increased workloads, both for women and children, as activity levels have been raised. All beneficiaries have either received skills training, or have profited from increased access to information via the project staff. Overall, the rating for this sub-criterion is substantial (3).

15. Social Capital and Empowerment. Although the design called for participatory approaches, in practice these have not been adopted. Because of the lack of participation, social cohesion and local self-help has not been an outcome of ARMP, neither has the project made any contributions to building local capacities for community empowerment, nor in fostering other self-help initiatives. Overall the rating for this sub-criterion is negligible (1).

16. Food Security. The project has changed farming technology and practices by increasing farmers’ use of fertilizer for tree crops, increasing the amount of irrigation water, more effective pruning, increased use of contour ploughing, and more rational cropping patterns for land of varying gradients. As a result land areas and productivity have increased, and the combined effect will be to improve the robustness and resilience of the farming systems, thereby improving food security. The overall rating for this sub-criteria is therefore high (4).

17. Environment and Communal Resource Base. Changes in the natural resource base have largely been positive as water storage facilities constructed by the project have resulted in improved pasture, and the area of protected and stabilised soil on private farms has increased as a result of the SWC measures and the expansion of tree cropping. However, the project-sponsored cisterns for supplementary irrigation requirements do not adequately serve the new areas planted to olives and unintentionally the result is the depletion of what is already a severely depleted aquifer. On balance, however, the project has reduced short-term environmental risk and thereby contributed positively to livelihoods. The rating is substantial (3).

18. Institutions, Policies and the Regulatory Framework. No significant changes in public institutions policies or service provision have resulted from the project’s activities. The major change required is modernisation of the inadequate extension services, and ARMP has served to highlight this need. As a result of the credit experience ACC has been willing to modify its lending terms and conditions somewhat, however the changes made are small, and still do not mean that the poor will be eligible for credit. No substantial contribution has been made in promoting gender sensitive policies. Overall, the evaluation concluded that the impact of the project on institutions and policies had been limited, and the rating is therefore modest (2).

19. Gender Equality. The project design included not only the women’s programme, but specific references for inclusion of women-headed households in the SWC and agricultural components to enhance women’s gender equality. As a result of demand, the credit allocations for women’s IGAs
have been significantly increased, which has also had the effect of increasing the skills training offered to women. Overall, therefore, women’s access to project benefits has been good and more than half of project beneficiaries are women. Women beneficiaries confirmed that they felt more empowered and played a stronger role in decision making in the household as a result of being income earners, particularly those that had no previous employment. However, the project has not contributed to or facilitated progress in gender sensitive policies (paragraph 18). On balance, the impact on gender equality is rated as high (4).

20. **Sustainability.** The IE concluded that the project SWC interventions would be largely sustainable after project closure, as the on-farm structures require little maintenance. By comparison, there are significant maintenance requirements for the mini-dams, hafiras, and check dams on State land, and it is probable that the long term maintenance of these structures will remain a government responsibility, with little possibility of cost recovery from users. As benefits increase from the planting or rehabilitation of tree crops, then annual inputs from the farmers are likely to continue and will maintain yield levels. The sustainability of the increased area under olives may be threatened by low prices for olive oil or high prices for groundwater.

21. Although ACC has not established a specific revolving fund it has confirmed its commitment to continue to provide loans by going beyond the initial allocations for credit. The credit line is profitable for ACC and there is a demand for it, hence there is no reason why it should not be continued as part of ACC normal/ongoing operations. Mission estimates are that despite some incongruence between loan duration and actual funding requirements, the IGAs undertaken are in general profitable for the borrowers, and hence will be continued. On balance, therefore, the evaluation concluded that the major project activities would be largely sustainable, and that the overall rating should be substantial (3).

22. **Innovation and Scaling up.** The project involved only limited innovation, rather success has been achieved by making known improved practices available to more people. This is replicable – hence the request for a second phase. The deep pruning of old olives can be described as a new technique, which can be replicated through the extension services wherever it is appropriate. To an extent, the introduction of check dams was also innovative. The project has provided training to many women who could not take loans because they could not meet ACC’s conditions, if loan conditions could be modified then this programme could easily be expanded. Overall, the rating for innovations and scaling up is modest (2).

23. **Other Poverty Impact.** The emphasis for development within GOJ has shifted more towards ways of achieving poverty alleviation and creating employment – a strategy to which all Ministries are expected to contribute. For MOA, the successful experience with ARMP is the most appropriate initiative on which to build to help realize this strategy. Whilst this affect may not yet have been seen, it promises to be a significant factor in future planning. The rating for this sub-criterion is modest (2).

24. Overall, rural poverty impact as a result of the project was rated as substantial (3).

V. **PERFORMANCE OF THE PARTNERS**

25. **IFAD and the Cooperating Institution (CI).** In assessing IFAD’s performance, the mission concluded that whilst the intentions and relevance of the interventions could be rated very highly, there were some aspects of the design which were poor – especially the targeting criteria and the practical aspects of the implementation approach for community involvement. The arrangements for the involvement of ACC also did not offer any progress in terms of enhancing the outreach of credit to the poor. Overall, IFAD facilitated a design which “did the right things”, but did not systematically ensure that “the right things were done right”. Overall, the mission concluded that the CI had performed well in supporting project implementation, and decided to rate the performance of both IFAD and the CI as substantial (3).
26. **Government and its Agencies.** Overall, the arrangements made by MOA for project implementation have proved very satisfactory and commitment to the project is high. The only difficulties experienced during implementation relating to the MOA have been the reluctance to change Ministry operational arrangements to meet the implementation mechanisms as specified in the loan agreement and the reluctance to use loan funds for Technical Assistance (TA) or for contracting skills through NGOs etc. The Project Management Unit (PMU) has proved a very effective mechanism for project implementation, which has been demonstrated not only by the physical achievements of the project, but by the very pragmatic way that problems have been overcome, the decisive management involved in the modification of project targets at mid-term and the very good M&E arrangements and output. The ACC has been an effective partner in terms of disseminating the credit funds, but cannot be said to have contributed much to the achievement of the project’s poverty objectives. Overall, the performance of the government agencies is rated as substantial (3).

VI. **OVERALL ASSESSMENT AND CONCLUSIONS**

27. **Participation and Targeting.** In practice there has been little beneficiary participation in project planning or implementation. In its recommendations the MTE provided detailed suggestions as to how progress might be made with addressing participation in the second half of the project, and after this a community-based approach was developed in the spring and canal rehabilitation activities. However, no such approach has even been tried in the WDP, where it could have encouraged the participation of poorer women. The IE came to the conclusion that the targeting mechanisms in ARMP had been weak. Inclusion or exclusion as a project beneficiary had become both confusing and rather arbitrary, and there did not seem to be many factors which tilted the benefits towards the poor.

28. **SWC and Agriculture.** The evaluation concluded that there had been substantial achievements in most of the major objectives of both the SWC and the agricultural development components. Firstly, the degradation of land and water resources has been reduced or arrested on both public and private land where project interventions have taken place. Secondly, there has been a shift from cereal to tree crop production on sloping land, with the consequence of improved conservation and the potential for improved farmer incomes, and thirdly, rangeland grazing and water access has been improved. However, the objective of optimising the long-term productive use of the land and water resources still needs to be addressed in the light of the continuing dependency of most project farmers on abstracted groundwater. In addition, the sustainability of the improvements achieved so far may be affected by reduced prices of olive oil, the reliance on purchased groundwater, and the lack of formally structured Water User Associations on communal irrigation schemes.

29. **Credit.** In terms of the disbursement of credit funds, ARMP had been very successful and had had a significant impact on household incomes for over 1000 beneficiaries. The high repayment rate on these loans has meant that the exercise has been profitable for ACC and is a good indicator of sustainability of the programme. However, the mission concluded that one reason for the high repayments had been the stringent lending conditions, which meant that borrowers predominantly came from non-poor groups. The intended institutional strengthening and other support for ACC have largely not been realised, with the result that ACC’s has not extended its outreach as planned.

30. **Women’s Programme.** The evaluation concluded that the WDP had achieved its objective of increasing family incomes through IGAs. The outreach has been very creditable, especially given the under-staffing of the Unit, and has demonstrated the popularity of and need for the credit which was made available. In addition, the provision of skills training pre-credit has enhanced the capacities of and served to empower a very large number of women, much more than was ever planned for in the design, and this will bring its own longer term benefits, even if credit is not made available to all.

31. **Institutional Strengthening.** The very comprehensive training programme provided for project staff had been instrumental both in increasing capabilities and fostering good team spirit. Similarly, considerable training has been provided for beneficiaries. However, whilst skill levels may have been deepened, they have hardly been broadened, as little use has been made of the funds included for NGO
support, research and studies. This has acted to limit the implementation of the project in the ways envisaged in the appraisal, especially in terms of developing participatory approaches and widening the scope of IGAs.

32. **Coordination and Management.** The evaluation concluded that the project implementation mechanisms had largely been very effective, and had contributed both to the extent of the project achievements and the dynamic nature of the processes created. However, there is a need to arrange for a handover mechanism, so that completed areas and activities are on-passed to District based officers for routine follow up operations. In terms of coordination, the evaluation foresees a need to strengthen the role of the ACC as an implementing partner. At present credit activities are divorced from the central soil and water conservation objectives and activities and the PMU and ACC manage their separate aspects of the project on parallel tracks, without clear common objectives.

**VII. INSIGHTS AND RECOMMENDATIONS**

33. **Participation.** In the second phase ARMP could make a significant contribution by assisting MOA to apply participatory approaches in its poverty alleviation and agricultural development efforts. What is needed is the adoption of a strategic approach to participation and its mainstreaming at all levels within the Ministry. The mission has prepared a series of steps to guide this process (see recommendations, Chapter VIII). In order for the poverty focus of the project to be improved it is necessary to sharpen and clarify the targeting mechanisms. In the design of the new phase consideration should therefore be given to directing resources specifically towards the poorer groups, learning from the experience of phase I. A lost opportunity in Phase I was the lack of reaching the target group with credit for IGAs, and phase II needs to consider alternative strategies.

34. **Water.** In phase I the efficiency of water use in agriculture was not given the highest priority, but the limiting factor in GOJ’s development strategy for agriculture through conservation is water, not land. Firstly, this means that the project must stop relying on ground water for irrigation and gear the extent of the agricultural area to the scarcest resource, i.e. water. Part of the reason for the present groundwater abstraction is that the present capacity of the cisterns (30 m$^3$) is almost invariably too small for the supplementary irrigation requirements. However, the evaluation found that the present project proposals to address this problem may actually serve to exacerbate it, and are not based on adequate examination of the irrigation needs. Secondly, there was considerable variation between farmers in the frequency of irrigation and in the amounts of water applied, suggesting that both over-irrigation and under-irrigation may occur. In a low-rainfall area farmers, irrespective of their level of experience (and it should be borne in mind that some of the project’s beneficiaries come from non-agricultural backgrounds), need to be given clear guidelines and recommendations regarding efficient water-use practices. Thirdly, in order to protect the investments already made and ensure a mechanism for management and maintenance on community schemes, and to settle any disputes which may arise, it is vital to ensure that there is an established local organisation which will take responsibility for the completed works. The present systems were found by the mission to be largely inadequate, and in phase II this needs to be given high priority. To address these three issues in water, the evaluation made a number of recommendations for consideration in phase II (Chapter VIII).

35. **Agricultural Extension.** Jordan’s agricultural extension service is seriously under-staffed and its effectiveness is consequently compromised. This presents a problem in terms of the continuing support required by farmers in order to fully realise the development potential from improved land and water resources. At the moment the extension agents working with the project appear to have to continue their activities with an ever-growing portfolio of clients. This is addressed under the decentralisation proposals of the evaluation (Chapter VIII).

36. **Credit for Development.** In considering a second phase of ARMP, credit needs to be given a more central role and to be considered in the wider view of rural financial services, following IFAD’s policy guidelines (which had not been developed at the time of the original design). ACC should continue to play a key role in any MOA development strategy, as it remains the only formal
organisation able to provide financial services to producers in the rural areas. The need, however, is to identify the mechanisms through which ACC can grow into a much more broadly based lender, able to reach out to those individuals and groups who need ACC services in order to climb out of their poverty. Despite the achievements and successes in phase I, the limitations demonstrated show that there is still some way to go.

37. The evaluation has identified three issues on which progress needs to be made. These are, firstly, arranging for better integration of development objectives and coordination of activities between the PMU and ACC branches, as well as providing a mechanism for monitoring credit utilization. To achieve this it is recommended that a Credit Unit is included in the PMU. Secondly, the possibility of lending through groups must become a reality, at least for a small proportion of the credit funds provided. And thirdly, further institutional strengthening should be provided for ACC, to share with the Corporation the burden and risk in accepting the challenge inherent in making changes to their credit mechanisms. ACC needs external expertise and stimuli to establish the new mechanisms suggested, and needs support from an organisation that has positive experience in anticipating and addressing the difficulties that will arise. Detailed recommendations are made by the evaluation covering these aspects (Chapter VIII).

38. Women and Poverty. Whilst the present WDP provides a building block for phase II, it should not just be copied. Rather, the need is to improve a number of aspects. In particular, in order to reach poorer women it will be necessary to encourage group formation, before moving to suggesting IGAs and providing credit. To facilitate group formation will require the assistance of a skilled and experienced local NGO, which will need to emphasise capacity building for beneficiaries (such as the organization of collective working, administration and marketing skills). The evaluation also suggests the sponsoring of women’s centres, as it would be more cost efficient for poor women to work collectively and would assist in institutionalising women’s groups. Finally, the range of IGAs needs to be expanded after feasibility and marketing studies which seek to identify products that have market demand and are financially viable.

39. Institutional Strengthening. In phase I the Ministry was not convinced that the participatory approaches being suggested were either cost effective or appropriate to the development being sought. However, it is now timely to help the MOA with the sort of institutional strengthening which will let them develop new approaches to development. The key to this is for the Ministry to accept the need for assistance with the development of skills which it does not have. An appropriate package of institutional strengthening should therefore be included in phase II, covering both the technical training requirements of beneficiaries and Ministry staff, and sufficient to allow for the adoption and introduction of the suggested participatory methods. In addition, assurances should be sought that identified staff needs and planned training activities will be fully funded during implementation of phase II.

40. The evaluation considered that in phase II wider use should be made of the assistance and support available in other Departments in the MOA, both to address strategic issues (e.g. the marketing of olive oil) and to obtain technical support (e.g. with arranging training). In addition, care should be taken to link with the Ministry’s own M&E Department, in order to harmonise reporting on the overall progress of projects. Consideration should also be given to the adoption of the M&E system devised for ARMP in a wider context: there is the potential to extend the methods used to many projects in the Region. With appropriate support ARMP could provide a local “centre of excellence” for training in M&E.

41. Decentralisation. The differentiation between project activities and the regular roles of the staff of the FDAs have been blurred. Whilst this may have come about because the project has more funding and is able to promise more to potential beneficiaries, it is not sustainable. Essentially the strategy should be for the project activities to temporarily complement the activities of the FDAs. This may require additional support for the extension services as well as a formalised handover process by which developed areas become the responsibility of the FDAs. In addition, the ongoing involvement
of the Regional Agriculture Coordinating Committee (RACC) needs to be strengthened, so that relevant decisions about the project’s day-to-day work programme can be taken by the agencies most closely involved. Both these aspects would serve to reinforce the decentralised nature of the project’s activities. As such, the future purpose of the PMU might then be better understood as demonstrating the new approaches and techniques and training the local staff, before moving on. Recommendations to this affect have been provided.
I. INTRODUCTION

A. Background to the Evaluation

1. 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 project closed at the end of December 2003, and based on the successful implementation experience the Government of Jordan (GOJ) requested a second phase of the project. Although the project was subject to a Mid-Term Evaluation (MTE) in 2000, it is an IFAD requirement that for there to be a second phase, an Interim Evaluation (IE) should first be undertaken. The rationale for the IE was to assess project effectiveness and impacts and to derive insights and lessons to be taken into account in designing a second phase.

2. Since 1981 IFAD has supported six projects in Jordan, with a total cost of USD 147.2 million; of this loan and grant funds have amounted to USD 59.5 million. The three earlier projects (i.e. before ARMP) were mostly concerned with various aspects of support for rainfed agriculture, and included institutional strengthening for the Ministry of Agriculture (MOA) and the Agricultural Credit Corporation (ACC). These projects are all closed. ARMP developed the themes already touched on in the earlier projects, but with more emphasis on the environmental considerations necessary for sustaining rainfed agriculture, such as water harvesting and arresting soil degradation. Subsequently, IFAD has approved two further projects, one concerned with assessing the current status of rangeland resources with a view to developing a methodology for rehabilitation and community management of grazing areas, and the other basically replicating the aims of ARMP in the Yarmouk River basin. IFAD’s country strategy for Jordan aims to help target groups make more sustainable and profitable use of their private or common land and water resources by improving their access to rural finance, management skills, appropriate technology and marketing. The focus is both on rainfed areas in the highlands, and on rangelands; in both areas livelihoods from agriculture are vulnerable and environmental protection is a high priority.

B. Approach and Methodology

3. The evaluation was undertaken following the approach described in OE’s “Methodological Framework for Evaluation”. This requires a participatory approach to be employed so as to give weight to beneficiaries’ assessments of the changes in their livelihoods due to participation in ARMP. The MTE provided a number of pointers and recommendations to be addressed in the second half of the implementation period, some of which were enshrined in an Agreement at Completion Point (ACP). The approach adopted for the IE was therefore to update the impacts and assess the changes that had occurred as a result of the ACP and the MTE recommendations. More specifically, the Approach Paper for the IE described the objectives as:

- To assess the relevance of project objectives to the rural poor, the extent to which these objectives were achieved and the efficiency of the intervention;
- To assess the intended and non intended impact of the project on rural poverty and the prospects for sustainability of these impacts;
- To assess the implementation experience, identify successful and innovative approaches used during implementation and the potential for their replication/ scaling up, trace difficulties encountered and the means used to address them, and draw out lessons from this experience, especially those relevant to a second phase of the project.
4. The Evaluation Team visited Jordan in the period 7\textsuperscript{th} – 24\textsuperscript{th} January 2004. The work programme followed included extensive discussions with all organisations concerned with the implementation of ARMP (MOA, the Ministry of Planning (MOP), ACC, the Ministry of Irrigation and Water Resources (MIWR), the Directorates of Agriculture in Karak and Tafila Governorates, the National Centre for Agricultural Research and Technological Transfer (NCARTT) etc) supported by extensive meetings with beneficiaries throughout the project area. The mission held a participatory workshop at the end of the period of fieldwork, which was attended by over 100 beneficiaries and also briefed the Regional Agriculture Coordinating Committee (RACC) before leaving Karak. In Amman, the mission met with his Excellency Dr Hazim El Naser, the Minister of Water and Irrigation and Minister of Agriculture and Professor Awni Taimeh, Secretary General, Ministry of Agriculture, briefed them on its preliminary findings and greatly benefited from their direction and guidance. The mission also visited a number of NGOs e.g. Nour El Hussein and CARE\textsuperscript{1}.

5. The mission wishes to express its particular gratitude for the valuable and unstinting technical and logistical 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. The Project Completion report proved a valuable source of data for the mission.

II. MAIN DESIGN FEATURES

6. Jordan’s natural resources 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 the sustainable use of natural resources for agricultural purposes. 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 water consumption and livestock owners to increase the sizes of their herds. Consequently, the country faced chronic and steadily growing water shortages and good pastureland was converted into cultivated land, reducing the feed supply for livestock. Since then, GOJ reforms have meant that agriculture 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.

7. Of Jordan’s population of 5 million, about 12\% are thought to be below the government-defined poverty line\textsuperscript{2}. The reduction of poverty is a top priority for GOJ, and a National Strategy for Poverty Alleviation was launched in May 2002. However, a relatively high population growth rate (3.0\% in 2001), plus a slow rise in GDP (1\%), means that poverty is likely to increase unless the underlying causes are addressed. For the MOA, a major concern is to promote employment in the rural sector through stimulus of on- and off-farm activities.

A. Project Rationale and Strategy

8. The rationale for ARMP is that by enhancing natural resource management in the designated project areas, rural households will be able to intensify their agricultural practices, leading to improved incomes and less vulnerability. In the mid 1990s 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 were small and utilised low input techniques to minimize the risks inherent in an area of very uncertain rainfall. The key to increased

\textsuperscript{1} The mission was organised Dr Mona Bishay, IFAD Senior Evaluator and comprised Mr F. Butcher (Mission Leader and Institutions Specialist); Dr M. Hashem (Sociologist and Gender Specialist); Mr S. Goodbody (NRM Specialist); Dr O. Imady (Credit Specialist) and Mr S. Mananwatte (Economist and Financial Analyst).

\textsuperscript{2} This is subject to debate, figures vary from 15-30\% depending on source.
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 overlapped with the IFAD-supported Income Diversification Project, which emphasised livestock production. Whilst it was concluded that agriculture would remain the mainstay of the local economy, the project strategy recognised that complimentary activities should allow for income diversification and the fuller involvement of all members of the family.

9. The strategy called for the selection of areas for project interventions based on both technical and poverty criteria. The appraisal described 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.

10. For selected beneficiaries the project provided 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. On State land, which was used for grazing, the approach adopted was to construct erosion control structures and to develop water storage facilities to enhance the sustainable livestock carrying capacity. A community approach was to be adopted from the outset, working in co-ordination and partnership with organisations already in the field.

B. Project Area and Target Group

11. At the time of design the estimated number of rural households living below the poverty line in the project area was estimated at about 7000. 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). The basic target group definition adopted was therefore farmers with land holdings of less than 50 du (5 ha) in size, although all women-headed households applying for SWC activities were considered eligible. The women’s programme was to be based on applications received, with special attention paid to women-headed households.
C. Goals, Objectives and Components

12. The overall goal of the project\(^3\), within the GOJ strategies for the development of rainfed farming, was 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 was to be achieved by arresting soil degradation and restoring soil fertility, 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 were arranged in five components: Resource Management; Agricultural Development; Institution Strengthening; Women’s Development; and Co-ordination and Management. These components, as described in the appraisal, are summarised in Table 1.

Table 1. Summary of Project Activities by Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Management (56%(^4))</td>
<td>On-farm SWC works on 8 450 ha; off-farm SWC works for Wadi bank and flood protection including 130 check dams and placement of 2 750 m(^3) of gabion structures; Rehabilitation and improvements to 105 springs and lining of 8.4 km of main water distribution networks; Credit for on-lending to individuals and groups for supplementary SWC works, spring rehabilitation and land consolidation; TA for beneficiary and community mobilisation, establishment of data base, and development of design criteria; Training of trainers and staff in soil conservation, group formation, community mobilisation, beneficiary participation, and establishment of demonstration sites; Provision of vehicles and equipment for FDA 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; Support for the extension service, extension packages, technical messages and action programmes for field crop intensification; Training of staff and farmers, and establishment of demonstrations on farmer’s fields and improved research-extension linkages; Provision of vehicles and equipment for FDAs activities in extension services; and provision of recurrent operating costs.</td>
</tr>
<tr>
<td>Institution Strengthening (10%)</td>
<td>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, the provision of capital and recurrent costs of vehicles, office furnishings and equipment as well as support to a study on the transformation of ACC into a rural finance bank.</td>
</tr>
<tr>
<td>Women’s Development (10%)</td>
<td>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.</td>
</tr>
<tr>
<td>Co-ordination and Management (6%)</td>
<td>Support for the establishment of a PMU at Karak through the provision of staff salaries, allowances, incentives, training programmes, study tours, TA, studies and the capital and recurrent costs of vehicles and equipment; Support for establishment of a special sub-committee under the Permanent Steering Committee (PSC) in MOA, Amman.</td>
</tr>
</tbody>
</table>

Source: Appraisal Report

\(^3\) ARMP was designed before the introduction of Logframes, hence the goal is here defined as the overarching objective from the appraisal.

\(^4\) Percentage of project base costs.
D. Implementation Partners and Arrangements

13. Responsibility for project implementation was vested in the 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. To further define the socio-economic conditions in the project areas (complementing data collected by a Rapid Rural Appraisal (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.

E. Design Changes during Implementation

15. Technical Changes. In 2000, after three years of implementation, the project management prepared a proposal extensively to revise the targets in the resource management and agricultural development components. These changes reflected the demands from the beneficiaries and changes in unit costs, plus the introduction of a new activity - fencing. For on-farm SWC the main changes were an increase in the area protected by stone walls (by 40%), and increased capacities of cisterns, whilst all other targets were reduced. For off-farm SWC the number of dams was revised to take account of the larger structures being built, and the length of gabions was increased. In the Agricultural Development component the target for the planting area was increased (by 22%), as was the length of canals to be rehabilitated as part of the spring rehabilitation, but the area of orchard rehabilitation was reduced to reflect the project experience to that date, which was that farmers were unwilling to undertake deep pruning of their olives. The net incremental cost of these changes amounted to USD 1.52 million. These proposals were endorsed by the MTE and the reallocations approved in 2001. The revised targets did not change the nature of the project itself (and hence the objectives), but simply increased and re-balanced the targets on a demand-driven basis. The revised targets have been used in the IE, unless otherwise stated.

16. As well as the major changes described above, larger water storage structures known as mini-dams were substituted early on for many of the check dams described in the Appraisal, as these structures were more familiar to the Dams Department of MIWR, which became involved in the design and siting of the dams. The effect of this change was to reduce the ability of the project to improve erosion control in the wadis, but to increase the capacity of water storage.

Photo 1: Mini dam at Wadi Al-Kharsani.
Photo by Frank Butcher, IFAD Consultant.
17. **Credit Demand.** In the design two-thirds of the credit funds were allocated for supplementary on-farm SWC activities and land consolidation. However, it was soon realised that the demand for credit for these activities was very limited. In the case of credit for on-farm SWC activities, potential beneficiaries quickly learned to "adjust" their land holdings to take advantage of the project’s area limitations for support: i.e. land holdings were transferred to limit individual’s ownership to 25 du, hence loans to carry out additional SWC activities were hardly required. In the case of land consolidation, there was an assumption in the design that lack of access to credit alone was the main constraint to land consolidation. This seems to have arisen because of insufficient knowledge of the land tenure arrangements and the social pressures leading to land fragmentation; credit alone was never an appropriate mechanism to address this problem. At the same time, demand for credit for women’s IGAs was proving to be very high; credit funds were therefore shifted between the categories to meet this increased demand. The end result has been that 90% of the credit provided by the project has been for women’s IGAs. Hence, the intended nature of the credit activities changed quite significantly during implementation.

18. **Community Participation.** In the appraisal a participatory community-based approach was described for the implementation of ARMP, and specific provisions were made to support the development of this approach. These included a role for NGOs 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. To demonstrate and support the introduction of these proposals, which represented a change in approach for MOA, an Extended Co-operation Programme (NGO/ECP Grant No. 068) was provided by IFAD for 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 Participatory Rural Appraisal (PRA) techniques, and direct involvement of two PMU staff in this programme.\(^5\)

19. However, in practice participatory approaches were not adopted by the project. Whilst the CARE experience was seen as interesting and useful, it was not accepted as offering any significant improvement on the methods used by the Ministry to that date, and also presented some difficulties to the staff in adapting their working practices (especially in terms of handling funds). Overall, it has to be concluded that the Ministry was neither sympathetic nor saw sufficient reason to adopt the CARE approach. The position of Community Development Officer, which was included in the project organisation, was therefore initially not filled. However, after the MTE, which strongly recommended that the project re-examine its approach to participation and sketched out possibilities for doing so, the position was re-instated and the project has made rudimentary attempts to introduce participatory approaches in spring rehabilitation (this is discussed further at a later stage).

20. **Targeting.** The targeting criteria described in the design were always going to be difficult to translate into practice. Whilst land holding may be a proxy for poverty in many circumstances, it was by no means clear that this was the situation in the project area. The project was asked to identify physiographic units which were located in poorer areas, and to work on them

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comprehensively to counter land degradation. In fact, it was never possible for the project to adopt a comprehensive approach as this relied on individuals with landholdings above 25 du to determine whether they would undertake SWC activities. The result has been that on-farm SWC is undertaken on self-selected individual farms. Off-farm the project has had great difficulty in identifying and quantifying the beneficiaries of water storage facilities, and location has been very dependent on specific geographical circumstances. For spring rehabilitation the project has relied on applications received, whilst for credit for IGA beneficiaries have had to meet tough ACC eligibility criteria. All this has meant that the project has had to adopt a very pragmatic approach to beneficiary targeting, far removed from the theoretical approach described in the design.

21. The implications of the inability to adopt the appraisal approaches to community participation and targeting were to change the overall approach to project implementation, but this was not specifically noted until the MTE.

III. SUMMARY IMPLEMENTATION RESULTS

A. Natural Resource Management

22. Soil and water conservation activities were planned for a revised total of 75 500 du: of this 81% had been achieved at the time of the IE, covering 2700 farms. The overall achievements for SWC by major activity and comparisons with targets are summarised in Table 2 below.

Table 2. Achievements of SWC Measures Compared to Appraisal and MTE Targets

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Unit</th>
<th>Target at appraisal</th>
<th>Target adjusted at MTE</th>
<th>% of adjusted targets achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-farm SWC</td>
<td>Cisterns</td>
<td>m³</td>
<td>160 000</td>
<td>67 200</td>
<td>127</td>
</tr>
<tr>
<td></td>
<td>Stone contour walls</td>
<td>dunum</td>
<td>50 000</td>
<td>70 000</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Gradoni terraces</td>
<td>dunum</td>
<td>13 000</td>
<td>1 000</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Contour guidelines</td>
<td>dunum</td>
<td>13 000</td>
<td>3 000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tree basins</td>
<td>dunum</td>
<td>6 500</td>
<td>1 500</td>
<td>101</td>
</tr>
<tr>
<td>Off-farm SWC</td>
<td>Check-dams</td>
<td>No.</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water storage dams</td>
<td>No.</td>
<td>50</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>Gabions</td>
<td>m³</td>
<td>2 750</td>
<td>5 150</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Springs</td>
<td>No</td>
<td>105</td>
<td>105</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Canal rehab</td>
<td>Km</td>
<td>8.4</td>
<td>26.8</td>
<td>95</td>
</tr>
</tbody>
</table>

Source: project records

23. On-farm SWC. The project supported the construction of cisterns of 30 m³ capacity on the basis of one cistern per owner irrespective of farm size, and 2 871 cisterns have been constructed during the lifetime of the project, giving a total water-storage capacity of 85 664 m³. The cisterns, albeit with the help of purchased water, have contributed very significantly to the expansion of the area under tree crops, and project farmers whose olive trees are already in production attribute much of their trees’ good condition and satisfactory yields to the favourable irrigation regime that the cisterns have encouraged them to follow. Unless rainfall has been very poor, most cisterns are still quite full of rainwater by the end of May and this is used for supplementary irrigation as the dry season progresses. The duration of this supply obviously depends on the amount of land requiring supplementary irrigation, but in general it lasts for between one and two months. The present capacity of the cisterns is almost invariably too small for the full supplementary irrigation requirements, with the result that farmers now purchase water from commercial wells (which they store in their cisterns), in order to make good the shortfall for supplementary irrigation. The project has facilitated the construction of 1 268 tree basins, built around olive trees to enhance soil-moisture content, on a total farm area covering 1 520 du.
24. **Water-Use Efficiency.** The mission found that there was considerable variation amongst farmers in the frequency of irrigation and in the amounts of water applied, suggesting that both over-irrigation and under-irrigation may occur. This suggested that area-specific irrigation recommendations are not readily available to growers, which is extremely important in the context of a project in a low-rainfall area where efficient water use is fundamental to its success.

25. Almost 900 km of stonewalls have been built by the project, protecting 58,800 du of agricultural land. This has proved the most popular activity with beneficiary farmers and exceeds the original appraisal target by 18%. The walls are well constructed and, in general, appropriately positioned. The primary function of the walls is erosion control and the promotion of soil-moisture retention, and in this respect they have performed well. Investigations by project staff have indicated that levels of soil moisture are generally higher in the vicinity of the stone walls than they are in unprotected areas of the fields. This is often visibly corroborated by the enhanced vigour, condition and yield of olive trees and other crops growing close to the walls. An unintended benefit for farmers has been significant increases in land values as a result of the SWC activities, especially the construction of stone walls. This may also be partly because of the stone clearing which takes place adjacent to the walls.

26. Five km of Gradoni terraces were built at the beginning of the project, but it was quickly recognised that stone contour walls were more popular with beneficiaries. Following the MTE, only a further 34 du were protected with the construction of Gradoni terraces. Some 7 km of contour guidelines were built during the first years of the project, but this activity was abandoned as it was not popular or considered appropriate as a project intervention. Although the area cultivated using contour tillage, which was encouraged by the project, has not been quantified in the project area, its increased use is generally evident on the farms of project beneficiaries.

27. **Off-farm SWC.** The design allowed for the construction of 130 check-dams, but this activity was soon changed to the construction of earth mini-dams and hafiras: 29 rock-faced earth mini-dams and hafiras (58% of the revised target) were completed between 1998 and 2003, giving a total capacity of the water storage of 639,000 m³. At the time of the interim evaluation (the middle of the rainy season), many of the hafiras and earth mini-dams were quite full. The mission was informed that even in the driest season the dams and hafiras will still have enough water for some livestock. The amount and quality of pasture around the hafiras has reportedly been improved during the summer months by virtue of the increased soil-moisture retention. In addition, the presence of wildlife is said to have increased in the vicinity of the hafiras. The project estimated that 18 population centres have benefited from the mini-dams and hafiras, mainly in respect of livestock watering. Over four thousand m³ of gabions (80% of the MTE target) have been installed along wadi banks on state land, both protecting an estimated 1,000 du of agricultural land and serving to control inflows into the water storage structures.
28. **Spring and Canal Rehabilitation.** Spring rehabilitation involves permanent protection of the source to prevent damage and contamination and improvement of the canals which distribute the water downstream, mostly to old established olive groves. Works have improved the utilisation of 69 springs, representing 66% of the target, bringing benefits to 1121 farmers. This activity is undertaken in conjunction with fruit tree rehabilitation (see below). Canal rehabilitation has been carried out to a high standard and canals are of a sturdy construction and easily maintained. In addition, over 10 km of PVC pipe have been laid to convey water over terrain unsuitable for concrete canals. The project’s programme of spring and canal rehabilitation has generally resulted in increased volumes of water in irrigation canals, reduced water loss, faster water delivery, more efficient irrigation and increased olive production. Individual producers say that their yields have increased significantly following the improvements. Some groups also report that, prior to the rehabilitation, members often used to have to buy water from commercial suppliers and that now this is unnecessary, although internal trading of water allocations within the group is not uncommon.

B. **Agricultural Development**

29. Agricultural development (referred to in project reports as agricultural modernisation) has taken place so far on about half the area which has been improved through SWC activities. The gap between the newly-planted areas and the area improved by SWC measures, which was mostly intended for tree crops, was 30 081 dunum at the end of 2003. The mission met farmers who had benefited from the SWC interventions in 2002 but had, for financial, labour or other reasons, been unable to plant in 2003 but intended to do so in 2004; the main reason for the gap would therefore appear to be the result of a normal lag between land improvement and planting. The concern that beneficiaries accepted the SWC improvements without any intention of following up by planting trees, seems to be mostly unjustified. The physical achievements against targets of the Agricultural Development component are shown below.

**Table 3. Agricultural Development Achievements against Targets**

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Target</th>
<th>Achieved</th>
<th>% achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of farms</td>
<td>farm</td>
<td>2 400</td>
<td>1 364</td>
<td>57</td>
</tr>
<tr>
<td>Fruit tree planting</td>
<td>dunum</td>
<td>30 000</td>
<td>30 720</td>
<td>102</td>
</tr>
<tr>
<td>Perimeter fencing</td>
<td>dunum</td>
<td>30 000</td>
<td>32 419</td>
<td>108</td>
</tr>
<tr>
<td>Olive rehabilitation</td>
<td>dunum</td>
<td>5 000</td>
<td>3 900</td>
<td>78</td>
</tr>
</tbody>
</table>

Source: PMU Project Completion Report (October 2003) and PMU staff

30. The overwhelming majority of trees planted are olives (140 000) although about 5 000 pistachio seedlings have also been released from MOA nurseries. Some farmers have planted vines on their land, and a few have planted figs, almonds, peaches, citrus and apples. Project support for perimeter fencing was introduced after appraisal in response to requests from beneficiaries, and so far 1 254 farms, out of the total of 1 364 benefiting from the agricultural programme, have taken up this option. However, considering that fencing was requested by farmers, the mission found little enthusiasm for it. Its main role seems to be to demarcate boundaries, as it is not really a deterrent to theft.

31. The project had a role in introducing improved technology to farmers and has organised 22 rainfed crop demonstrations on NCARTT land and on farmers’ land. Encouragement has also been given for the adoption of the MOA’s “minimum package” for cereals and legumes on slopes of less than 8%.

The mission was concerned to learn that the agricultural extension service is so understaffed that farmers do not have ready access to such information from their Agricultural Directorates. The mission met several farmers who were considering growing apples and some who

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6 The minimum package consists of a set of recommendations for rainfed cereal production which aim to upgrade the standard production techniques used by traditional farmers.
had already planted small orchards. None of these farmers, however, knew how suitable their land was for apple production, what yields they could expect, what the market prospects were for their production, or what financial returns they could expect. The same appears to be generally true for most other crops apart, perhaps, from pistachio and grapes. In short, most farmers wishing to diversify do so in an experimental rather than an informed manner.

32. **Fruit Tree Rehabilitation** has consisted of deep-pruning of old olive trees that had become unproductive, and providing one application of fertilizer. Initially this activity was unpopular with farmers until the benefits were demonstrated, at which point demand greatly increased. Olive rehabilitation normally takes place where springs and canals have been rehabilitated. Although achieving only 78% of its targeted area, this intervention has been very successful. Results are very obvious in the enhanced vegetative vigour of the trees and in as much as a reported three-fold increase in yield. Many, though not all, growers have continued to apply fertilizer to their rehabilitated trees at their own expense. The exercise has also had an extension aspect to it, since growers have been shown how to carry out deep pruning and would presumably be able to carry out the operation on other trees. Many stated that they had been aware of the necessity of pruning, but that they had lacked the technical knowledge to do it properly.

C. **Credit**

33. **Credit Design.** In total, USD 2.33 million was allocated for credit purposes, of which incremental credit needs amounted to USD 1.87 million. Of the credit 67% was intended for activities covering land consolidation and supplementary SWCs, and 33% was for women’s IGAs. There was no credit component in ARMP, rather credit activities were included as part of the other components, which was awkward as all credit activities were implemented by ACC through a subsidiary loan agreement. Also included were resources for training and allowances for ACC staff, the computerization of ACC operations at branch level and the completion of a study on the transformation of ACC into a rural bank.

34. **Credit Disbursements.** At the time of the IE a total of 1152 loans had been dispersed: 734 loans in Karak and 314 in Tafila. Of this, 1034 loans have been dispersed to women” (260% of the initial target), following re-allocation of the credit funds between categories. Hence, over 90% of the total loans, and 80% in terms of absolute value have been provided for women’s IGAs. The summarized disbursements by loan category and target amounts are shown in Table 4.

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7 This was the figure for end-June 2003.
Table 4. Summary Credit Disbursements against Targets

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Target (USD 000s)</th>
<th>Loan Amounts (USD 000s)</th>
<th>% Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>IGAs</td>
<td>621</td>
<td>1 527</td>
<td>246</td>
</tr>
<tr>
<td>Land Consolidation</td>
<td>874</td>
<td>236</td>
<td>27</td>
</tr>
<tr>
<td>Supplementary SWCs</td>
<td>404</td>
<td>97</td>
<td>24</td>
</tr>
<tr>
<td>Totals</td>
<td>1 872</td>
<td>1861</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: ACC and Project records

35. Women were first required to have received training before they applied for loans: ACC has relied on the project staff to identify those who would be eligible for loans. However, project staff have received no training in credit assessment, hence the only criteria applied was the ability to satisfy ACC conditions. Applications were then processed by ACC’s branches in Karak and Tafila: interviews with beneficiaries indicated that on average loan applications required three to four weeks to process. All loans provided were at an interest rate of 7.5% for a period of eight years, irrespective of the purposes for which they were used. For loans that did not exceed JOD 6 000, two guarantors were required, with deductions made from the salaries of one of them. Collateral for these and higher loans included the titles to land and buildings.

36. Whilst regular reports on the numbers of beneficiaries and the amounts dispersed were provided to the project, ARMP staff were not involved in follow up procedures nor were they involved in the regular monitoring of the way in which the loans were utilized by beneficiaries. This has created a distinct disconnect in the project, and credit is not seen as an integral part of a larger overall project.

37. **Credit Usage.** Approximately 44% of loans taken by women for IGAs financed dairy processing (sheep milk), whilst other activities have mostly centred on other forms of food processing. Overall, the loans appear to have been very profitable (more so than at the time of the MTE). Average annual profit was estimated at JOD 829 (USD 1 160) or 57% of average annual income (of JOD 2 016 (USD 2 822)). Loan profitability is discussed further under impacts.

38. **Repayments.** As a result of the ACC lending conditions (deductions from the salaries of the guarantors) has been a high repayment rate (89%). The appraisal envisaged the creation of a revolving fund that could perpetuate the provision of loans beyond project closure, however, whilst a distinct account has not been established, (despite such as stipulation in the Subsidiary Loan Agreement) ACC has continued to provide loans to eligible beneficiaries from its regular resources. So far 168 loans have been provided after the initial allocation for credit (i.e. USD 1.872 million) was exhausted.

39. **Support for ACC.** By June 2002, 31% of resources allocated for the institutional strengthening for ACC in Karak and Tafila had been utilized – to purchase vehicles and fund staff training (study tours) to Egypt and Tunisia. ACC remains reluctant to use these loan funds. It maintains that institutional support should be provided from grant resources. This has meant that ACC outreach in the project area has not improved substantially.

D. **Women’s Development Programme (WDP)**

40. The main objective of the WDP was to help increase poor families’ incomes by assisting women to undertake small off-farm income generating enterprises. The programme consisted of skills training allied to improved access to micro-credit, provided through ACC. The design envisaged a WDP unit with eight officers, and support from an NGO, especially for group formation. The project budget included allowances for training in targeting, conducting feasibility and marketing studies, and developing participatory approaches.
41. In practice the WDP unit has been treated as part of Extension Services, and has operated with just five officers. Several NGOs have been contracted for short periods to train the staff in a range of activities, such as participatory approaches, group formation, and training of trainers in starting small enterprise, but an NGO was not contracted to provide ongoing support services. Despite the lack of staff and support, the WDP has evolved into a much bigger programme than expected, by a factor of 250%. Instead of the studies included in the design the PMU conducted a small survey in the target areas to identify IGAs of most interest to women, which proved to be food processing, dairy processing, home gardening, sheep and goat breeding and poultry breeding. Three NGOs (CARE, Nur Al-Hussein Foundation and Zein Al-Sharif Foundation) and two universities (the University of Mut’a and University of Jordan) have been contracted to provide training for the beneficiaries. By project completion, 343 training workshops had been conducted (89% of target), reaching approximately 2,526 women. This is most impressive, although the mission noted that only a small number had received training in management skills (such as bookkeeping and marketing), with the result that records of basic product costs and loan repayments were largely not available. In addition, there is a considerable discrepancy between the number of women who have received training (2,526) and the number who have taken loans through ACC (1,034), which implies that family incomes may not have been increased for the majority.

42. The mission interviewed a selection of beneficiaries in Karak and Tafila, and found the following common attributes:

- The majority are 40 years old or more;
- most are educated, and many are retired school teachers or nurses with pensions of approximately JOD150/month;
- most of them had living spouses who were either employed as civil servants, or retired;
- the majority of spouses owned land and were also involved in agriculture;
- most had more than five children;
- many had at least one child in University.

43. The mission concluded, in agreement with the MTE findings, that the majority of WDP beneficiaries were not drawn from the poorest groups. The selection procedures of both the WDP and the ACC did not ensure the inclusion of poor women. This has occurred even after the ACC modified its loan conditions in response to MTE recommendations.

44. Group Working. The WDP officers have found resistance to the concept of small enterprise groups, and none have been formed through ARMP. The mission concluded that the WDP staff neither had the appropriate skills nor did they have suitable support to introduce this concept. The

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8 Over 40 women were interviewed, individually or in focus groups.
result is that individuals did not see the benefits of the group approach. Moreover, as many beneficiaries had some form of financial safety net, they were not afraid of taking entrepreneurship risks on their own. The lack of a women’s centres, which could have provided focal points for meetings and training, and might also have contributed to social cohesion, may also have been a factor.

E. Institutional Strengthening

45. The project has undertaken a very comprehensive range of training for project staff, including no less than 57 courses arranged by the project and a further 32 courses which project staff have attended, but were organised by third parties (e.g. MOA, Noor Hussein Foundation, Mut’aa University etc). 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). Project costs included Technical Assistance (TA) in *inter alia* water harvesting, software development and research, however the mission 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 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.

46. The mission considered that whilst the training provided has been appropriate and has almost certainly been one of the foundations of project success, it is regrettable that the Ministry did not take the opportunity to widen its capabilities by contracting services in innovative subjects which could enhance development impacts and possibly sustainability. This affects such aspects as developing a participatory approach or group formation. The mission was informed that this may be because of a wider MOA policy, which has not been stated explicitly, not to use loan funds for TA or advanced training.

F. Coordination and Management

47. **Project Coordination.** There are two aspects to coordination in ARMP. The first is the coordination affected through RACC, which brings together the agencies concerned with rural development at the level of the governorates, and the second is the coordination between the project management and ACC, both agencies within the same Ministry. The RACC has an extremely important function as the intention is that the project should be implemented, and the developments ultimately maintained, in a decentralised fashion through the Directorates of Agriculture in each governorate (the RACC is chaired alternately by the Directors from Karak and Tafila). The RACC serves as the mechanism to fully involve, e.g. NCARTT, ACC, and other Regional bodies, and the project is required to send monthly reports to the respective Governors. However, the RACC appears to have little authority, as it can only recommend actions. This is, at the very least, unfortunate, as this committee can be more representative of beneficiary needs within the local setting, and probably has the best oversight in approving plans and actions.

48. The coordination with ACC, which is also through the RACC, is limited to exchanging reports and data on credit: the mission concluded that in any future arrangements a role should be defined for ACC which would provide a much fuller involvement in more activities, so that there could be more mutual support and joint striving to achieve the project objectives overall, rather than the narrow focus on credit which exists at present.

49. **Project Management.** Now that the position of the Community Development officer has been reinstated, the project organization is much as proposed at design. The ARMP organisation has three layers of staff, who work in the four Directorates, the PMU and at the MOA headquarters in Amman. The staff in the Field Units report technically to the Project Manager and administratively to the Directors of Agriculture. At present the project has 111 staff, with vacancies for two Civil
Engineers. The staff cadre is well qualified for the tasks required. Project achievements to date indicate that the implementation arrangements have functioned well. However, the organisational arrangements do not consider the post-project sustainability of the Field Units that have been created, or the handover of completed development areas to other staff in the FDAs for routine follow up operations. The funding that has been provided through the project for the Field Units appears to have firmly anchored them in the project organisation. This has the potential to become a serious problem as the tree crops being promoted need technical backstopping from the extension services in the longer term. Indications are that such support may also be needed to realise the investments being made in SWC, both on- and off-farm. The possible requirement to support the extension services to ensure the sustainability of project benefits is considered later.

50. Ministry Support. Direction and guidance for the project has been exercised through the Permanent Steering Committee (PSC) of MOA, which was established in 1986 and is chaired by the Minister, whilst administratively the project comes under the PD. This arrangement has worked well, and the project’s success has been instrumental in influencing Ministry thinking and development planning, especially with respect to participatory approaches. However, the mission concluded that there has been limited overlap with other Ministry Departments, even though some development aspects of the project are of direct relevance to these Departments, for example olive production and pricing, rangeland and livestock. If, as a policy, the Ministry wishes to greatly expand its efforts in rainfed agriculture and environmental protection, then the mobilisation of all the resources available becomes a significant factor. Conversely, some of the problems faced by ARMP’s management, such as the fall in the price of olives (and the associated needs to investigate crop diversification), the need for long term support from the extension services etc, require a broader, strategic approach. The mission concluded that there was much to be gained from enhancing the two-way flow of information, ideas and people between the PMU and other specialist Departments in the Ministry.

51. Project Accounting. The project has used the standard procurement and accounting procedures of the MOA, which has meant that records are kept manually and that there is a lengthy process for obtaining approvals for expenditures. Annual Work Programmes and Budget (AWPBs) have to be submitted to the RACC, the PSC and the MOP for approvals, and auditing takes place through the government’s auditing offices, located in each Governorate. At the time of the IE (January 2004), disbursements of the IFAD loan were being shown as virtually 100%.

52. Monitoring and Evaluation. The M&E unit has developed its own database using 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 mission was impressed with the breadth and depth of the system that has been developed, which provided much of the data required for the evaluation. The M&E reports are used as the basis for management decisions, hence form a valuable management information tool.

53. Despite being included and costed in the design, no baseline survey was ever carried out for phase I of ARMP. 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. During implementation project staff have become aware of the need to assess the socio-economic impacts of their actions, and various impact studies have been carried out, some of them in preparation for the IE. These have proved very useful to the mission. However, this has only served to emphasise the need to focus on impacts both as a measure of project success and to guide the project management – this should occur in phase II as a logframe with impact indicators will be a requirement of the design.
IV. PERFORMANCE OF THE PROJECT

A. Relevance of Objectives

- To arrest degradation and to optimize productive use of land and water resources with active participation and partnership of the beneficiaries.

54. This objective was addressed through the Resource Management component; it was and is highly relevant in a country with very limited land and water resources and a high population growth rate. Good resource management will become increasingly important in the coming years. The package of on-farm SWC activities were appropriate for the project areas and gave the land use planners the tools with which to address the problem. However, on-farm water use will not be optimised by the project through the present interventions – there is a need to address water use efficiencies and to drastically reduce the use of groundwater for irrigation. Much of the land now planted with olives was previously unused. Off-farm, arresting erosion remains highly relevant for state lands, and by slowing runoff and enhancing infiltration this will lead to a general improvement in the environment as well as increasing the carrying capacity of the land near to the water storage structures. It is, however, difficult to assess if the interventions have optimised this potential.

55. The project arrangements for implementation required beneficiary contributions, although often these were in the form of labour. Nevertheless, the PMU estimated beneficiary contributions as 25% overall. Opportunities for “active participation and partnership” were available through the credit provision – 67% of which was intended for land consolidation and on-farm SWC activities in areas not directly qualifying for project support (i.e. areas of more than 25 du). The lack of uptake of these activities suggests that the relevance was not seen as highly by the land owners as it was by the project designers.

- To develop the agricultural potential of the area to help the poorer rural households to gain access to available technology and thereby improve their incomes and standards of living.

- To improve food security and income levels of the target group in the project area where soil and water conservation and spring rehabilitation would be undertaken.

56. The Agricultural Development component encouraged the shift from cereal to tree crop production (on suitable land with slopes greater than 8% and average rainfall of more than 200 mm). This must be seen in the context of the improvement of marginal land resulting from the activities of the Resource Management component. The objective of growing olives on this land was relevant, in that olive production (using run-off water for supplementary irrigation) is a more appropriate use of such land than rainfed cereal production, and is significantly more profitable. Intercropping further enhanced this shift. The technology required to enhance the productive capacity of the land was not innovative, in fact it was more historic, the success of the project has been in its ability to encourage the adoption of this technology. Agricultural potential has also been significantly improved through the rehabilitation of old olive groves – where newer technology was introduced - and by making available more water for livestock in state lands. All the indications are that these development have contributed to improved incomes for those beneficiaries who own land or livestock.

57. The Agricultural Development component also sought to stimulate closer integration of crop and livestock production within the predominantly mixed-farming system: this was less relevant, given the fact that rainfed cereal and fodder production (on which such integration would depend), being so precarious, sets low limits on the possible extent of such integration. However, the project has fostered improvements to rangeland, which has the potential to be of benefit to many poorer households.

- To improve the livelihoods of target groups of women in the project area through support for the activities that will enhance their off-farm earnings.
58. This objective was valid as described in the design, and was intended to complement the on-farm activities for the same farming households. However, the implementation arrangements, especially the ACC credit conditions, were never going to be able to reach this target group. The potential for an IGA credit programme was very high in the project area because it was recognised as an area which produced highly sought after, home-made food products.

59. Overall, the mission considered that ARMP’s SWC and agricultural objectives remained very relevant to the intended target groups. This conclusion was derived partly from considerations of the impacts on poverty presently being achieved (described later), a summary appreciation of the poverty situation prevailing in Karak and Tafila, and GOJ’s agricultural and rural development policies. The success of the project has in many ways just highlighted the considerable potential which still exists in the two governorates.

60. The mission rated the relevance as 4.

B. Effectiveness

61. Two of the on-farm SWC activities - cisterns and stone contour walls - have been especially effective in meeting the project’s conservation objectives. Large volumes of run-off water have been captured for supplementary irrigation, soil loss has been reduced, and soil-moisture retention has been increased. In addition tree basins have contributed to more effective utilisation of water. The promotion of olives on sloping land with SWC structures has resulted in increasing, dependable production on land that was previously producing very little. The permanent crop cover also plays a significant role in reducing soil erosion.

62. Off-farm, earth mini-dams and hafiras have been effective in impounding water and in reducing downstream soil erosion, and gabions have protected vulnerable areas and facilitated the reclamation of other marginal land. The rehabilitation of springs and canals on communal irrigation schemes has contributed to increased volumes of water resulting in increased olive production for more than 1 000 growers. Olive tree rehabilitation has been effective in increasing the productivity of a significant area of land. Targets for these activities have mostly been achieved or have been reasonably adjusted to beneficiary demand.

63. The project has included an effective mechanism for distributing and collecting loans for IGAs, which has resulted in enhanced income levels for many more women than were originally intended. However, ACC’s rules and regulations, collateral conditions in particular, excluded the poorest members of the target groups. Hence, in assessing effectiveness of the credit mechanism, a balance has to be struck between the results achieved and the qualification of the poor targeting. The mission considered that the fact that loans were not popular for land consolidation or extra SWC activities, which partly enabled additional women to be given loans, was a problem in the design of the project, and did not reflect under-achievement by ACC. Similarly, the design conditions for loans virtually reinforced ACC conditions, and seemed to condone the *modus operandi* of ACC, rather than indicating the need to develop a more appropriate mechanism to reach the poor. Hence there were faults in the original design, which were clearly highlighted by the MTE, but no effective action was taken thereafter, either by ACC, MOA, the Cooperating Institution (CI) or IFAD to address the recommendations made or agreements reached for the credit activities. This certainly reduced effectiveness.

64. Overall, the mission concluded that the objectives of the project had been significantly achieved. Major improvements have been recorded in soil and water conservation, agriculture, and skills levels. The project completion report shows over 97% of physical targets achieved. By upgrading and protecting the natural resource base, through technical support to farmers and by providing credit and skill development programmes (especially for the women) the vulnerability of a section of the rural communities has been decreased. The re-allocation of targets and resources after
the MTE improved the potential effectiveness of the project by better aligning targets and funds with beneficiary demands and project capacity. The mission concluded that the performance of the project in terms of its implementation effectiveness was high. The only detracting factor has been the lack of relative poverty of the groups that had been reached, which, it was further concluded, reflects the practical difficulties in targeting the interventions. In general the farmers benefiting from SWC activities are not the poorest, and neither are the women who can take out loans from the ACC. After balancing these considerations, the mission rated effectiveness as 3.

C. Efficiency

65. At appraisal, the incremental benefits were projected to be derived only from crop production, and the Economic Rate of Return (ERR) was estimated at 10.6%. The mission considered that this potentially underestimated the project benefits, as benefits are also derived from off-farm water storage structures, and the credit programme (through the promotion of income-generating activities). Fortunately, the very comprehensive M&E system developed by the project and the more recent impact studies undertaken in 2003 has meant that almost all the data necessary to estimate these benefits were available. The detailed cost/benefit analyses used to re-estimate the ERR can be found in Annex 4.

66. Although the cost-effectiveness of individual project activities for on-farm development has not been estimated separately, the combined direct benefits of measures such as the SWC activities, spring and canal rehabilitation and cistern improvements have clearly led to a high range of economic returns, depending on the mix of crops grown. Calculated ERRs vary from 13 percent for new olive planting intercropped with grapes, to 251 percent for rehabilitated olive groves intercropped with okra. For conservation activities on state land, resulting in increased pasture and water availability for livestock, data is much scantier and hence benefits more difficult to estimate with any certainty. However, potential returns appear to be quite high, and the project would do well to investigate these benefits further. For different IGAs undertaken by women, analyses show economic returns from 27 percent to 357 percent.

67. When all productive activities are combined and all benefits not included in appraisal estimates of ERR are considered, the Project’s revised ERR becomes 34.8 percent. This is a very good result, which is not unduly sensitive to price/cost changes (see sensitivity analysis in Annex 4) and indicates that borrowing for ARMP development activities is well worthwhile and should lead to increasing economic returns for the Jordan economy. This would also suggest that by and large the project has been efficiently implemented. Improvements to physical resources, enhanced and rejuvenated agricultural production, and promotion of off-farm income generation have also proved positive for family incomes: the likely increases to farm household incomes indicated in the Appraisal (between 30 percent to 400 percent) are probably correct.

68. The mission rated the efficiency of the project as 4.

V. RURAL POVERTY IMPACT

69. To assess the overall impact on rural poverty, six contributing domains are considered separately. These domains cover physical and financial assets, human assets, social capital and empowerment, food security and production, environment and common resources and changes in institutions and policy framework. Each domain assesses the extent of change as a result of project interventions - intended and unintended – based largely on beneficiaries’ perceptions complimented by extensive consultations with the implementing partners and analysis of project data. These impacts are addressed by asking a series a key questions, the results of which are summarised in the Impact on Rural Poverty Matrix (see Appendix 3).
A. Impact on Physical and Financial Assets

70. **Physical Assets.** Approximately 2700 households have benefited so far the on-farm SWC interventions, which have allowed households to extend and make more profitable use of their land. In addition, numerous households have benefited from better supplies of irrigation water following the project’s programme of spring and canal rehabilitation, and from the rehabilitation of established olive groves. Beneficiaries of the SWC and farm development programmes were mostly in the middle-income bracket (in the context of rural incomes). Therefore, although the project’s impact on improving households’ physical assets was significant, it had less impact on poverty than it might have had, if it had been able to target the poorest sector of the rural population. Off-farm physical assets have also been improved, but the impacts of these improvements have not been recorded, although they may be considerable.

71. **Household Assets.** Most beneficiaries of the WDP indicated that they had received small increases in their household incomes, allowing for modest additional expenditure on household items. However, mission calculations suggest that this may underestimate the impact of the IGA programme on household incomes. A number of beneficiaries reportedly spent a significant portion of their additional revenues on children’s university tuition. Since both increased farm production and women’s IGAs are considered largely sustainable, it is probable that household purchasing power has probably increased.

72. **Infrastructure and People’s Access to Markets.** People’s access to markets - an important factor in poverty reduction - improved as an indirect consequence of the project. The project brought about an expansion of the land under olives into several areas that were not served by roads. In response, the Roads Authority of the Ministry of Public Works has built, in Karak Governorate alone, more than 400 km of agricultural access roads since the beginning of the project. It is expected that this process will continue.

73. **Financial Assets.** To assess the impacts of the credit programme the project undertook a survey of 69 women in Karak and Tafila. Similarly, ACC conducted visits to beneficiaries to follow up on the benefits achieved. From these sources detailed reports were prepared on the status of the activities financed by the loans. These reports were made available to the mission, and were supplemented by interviews with over 50 beneficiaries: this comprised the basis for the mission’s analysis of the credit impact. On the basis of this analysis, the vast majority of loans did indeed provide significant amounts of additional incomes to borrowers and, hence, the financial assets of households can be assumed to have changed positively. Average annual profit was estimated at JOD 829 (USD 1160) or 57% of average annual income (of JOD 2016 (USD 2822)). This translates into an average monthly increase of JOD 69 or USD 97. Details of these analyses can be found in Annex 4 (Economic Analysis) tables 34-38. The high profitability reflects the dominant selection of dairy processing as a preferred activity for women’s loans.

74. **Access to Financial Services.** Approximately 1800 households benefited from taking loans from the ACC. Although the majority of ACC’s loans (approximately 90%) went to women’s IGAs, the majority of these beneficiaries appeared to be relatively better off middle-age women. Hence the project has resulted in improved access to financial services, but this was not widespread among the poor. This means that in terms of poverty impacts, the effects have been small. Even if an absolutely positive impact could be confirmed, the fact remains that this impact would have been even more positive had loan size and duration been more consistent with the activities financed and the nature of the target group addressed.

75. Overall the rating for this sub-criterion is 4.
B. Impact on Human Assets

76. **People’s Access to Potable Water.** Access to potable water has improved in two ways: (i) those with cisterns now have the option of using stored rainwater from their cisterns for drinking and other domestic uses, rather than relying solely on their piped supply for which they must pay; (ii) those whose incomes have already increased as a result of the project’s interventions now have more money for the purchase of drinking water. It should, however, be emphasized that access to drinking water is not a major concern amongst the project’s beneficiaries as the civic supply is generally satisfactory and not prohibitively costly.

77. **Women’s and Children’s Workloads.** The project activities, by their nature, have resulted in increased workloads, which have generally been translated into additional incomes. For example, if women adopted dairy production as an IGA, this increased their workload by approximately six hours per day. Children’s workloads have also increased as their parents depend on them as additional helping hands. The nature of these activities as home industries also entails all family members’ participation. However, this increase in women and children’s workloads is, in most cases, seasonal.

78. **Adult Literacy and Access to Information.** Farmers who have been involved with the project have profited from increased access to information concerning soil and water conservation and crop production at the time of their interaction with project staff. However, unfortunately, access to information from the MOA’s agricultural extension service has not improved as much as had been hoped as a result of the project. Beneficiaries of the WDP have all received training, some of which has been used to start IGAs, but much of which has simply been useful in enhancing skills for use in the home.

79. Overall, the rating for this sub-criterion is 3.

C. Impact on Social Capital and Empowerment

80. **Rural People’s Organisations and Institutions.** The introduction of participatory approaches was intended to be a major plank of the strategy for the implementation of ARMP, based on both the promotion of existing and the development of new people’s organisations. However, this has hardly occurred. Only towards the end of the project were WUAs recognised as being a requirement for the spring rehabilitation programme, whilst the potential for forming women’s groups was never strongly addressed. Hence, overall, the project cannot be said to have assisted with social organisation. In response to the detailed proposals made by the MTE for the testing of participatory approaches in the second half of the project, the Project Coordinating Committee (PCC) approved the reinstatement of the position of Community Development Officer. However, on its own this was an inadequate response to the challenge. With hindsight, once the approaches demonstrated by CARE were not accepted, it was unlikely that participation would be adopted at all.

81. Despite this, the MOA planners recognise the ARMP design principles as being very important for the new participatory approaches that they are now trying to include in their development projects. The project may therefore, in future, be seen to have influenced the Ministry’s development thinking in this respect.

82. **Social Cohesion and Local Self-help.** Because of the lack of participation, social cohesion and local self-help has not been an outcome of ARMP. The project has not made any contributions to building local capacities in community empowerment, nor in fostering other self-help initiatives.

83. Overall the rating for this sub-criterion is 1.
D. Impact on Food Security

84. **Changes in Farming Technology and Practices.** The project has brought about an increase in farmers’ use of fertilizer for tree crops, extra water for irrigation, more effective pruning, increased use of contour ploughing, and more rational cropping patterns for land of varying gradients.

85. **Agricultural Production.** The area under tree crops (mostly olives) has increased as a result of the project. This has already brought about an increase in the production of olive oil, and will continue to do so as more trees come into bearing in the coming years. The area under cereals has declined but cereal yields have increased; cereal production has, therefore, probably not changed significantly. Overall, farmers who have participated in the project have seen, or will see, an increase in their levels of incomes as a result of enhanced agricultural production.

86. The combined affect of the above will be to contribute to increased crop yields and crop production, and to improve the robustness and resilience of the farming systems, thereby improving food security.

87. The overall rating for this sub-criterion is therefore 4.

E. Impact on the Environment and Communal Resource Base

88. **Changes in the Natural Resource Base.** Hafiras created by the project have promoted natural pasture in their vicinity, and the area of stabilised soil on private farms has increased as a result of the project’s soil and water conservation measures and the expansion of tree cropping. These have both had a positive effect on the livelihoods of beneficiaries. However, the project-sponsored cisterns for supplementary irrigation requirements do not adequately serve the new areas planted to olives. Consequently farmers now purchase more water from commercial wells than they used to do before the project began. The project is therefore unintentionally accelerating the depletion of what is already a severely depleted aquifer. The impact of this erosion of a natural resource on farmers’ livelihoods may be negligible for a number of years, but may become significant if it results in increased water prices or in water shortages.

89. **Exposure to Environmental Risks.** The reduced exposure to soil erosion resulting from project interventions is of great benefit to farmers, though farmers who have expanded their productive areas now hold a larger investment in crops that are naturally vulnerable to environmental setbacks. The depletion of the aquifer constitutes an increasing environmental risk.

90. On balance, however, the project has reduced short-term environmental risk and thereby contributed positively to livelihoods. The rating is 3.

F. Impact on Institutions, Policies and the Regulatory Framework

91. **Change in Rural Financial Institutions.** As a result of the credit experience through ARMP, ACC has been willing to modify its lending terms and conditions somewhat. However, the changes made are small, and still do not mean that the poor will be eligible for credit. Changes in Government policies mean that this may not be acceptable for much longer, and that more fundamental change will be required. ARMP has helped to influence ACC thinking, but changes introduced still fall short of those required to bring in substantial enhancement in the poor’s access to credit.

92. **Public Institutions and Service Provision.** No significant change in public institutions or service provision has resulted from the project’s activities. The major change required is modernisation of the inadequate extension services, and ARMP has served to highlight this need.
93. **Policies and the Regulatory Framework.** Whilst the regulatory framework has not yet changed, GOJ policies towards the rural poor have been greatly updated to reflect new concerns with unemployment and migration. The project has not influenced these changes, but is seen by MOA as being a mechanism through which responses to the new policies can be developed. The second phase of ARMP, and subsequent projects based on soil and water conservation activities, are therefore more likely to have a clearer poverty focus.

94. Overall, the mission concluded that the impact of the project on institutions and policies had been limited, and the rating given is 2.

**G. Impacts on Gender**

95. **Gender Differentiation.** The project design included not only the women’s programme, but specific references for inclusion of women-headed households in the SWC and agricultural components. As a result of demand, the credit allocations for women’s IGAs have been significantly increased, which has also had the effect of increasing the skills training offered to women. Overall, therefore, women’s access to project benefits has been good and approximately one half of project beneficiaries are women.

96. However, implementation of the planned activities has not resulted in the extent of impact suggested in the design. The main reasons for this have been the restrictive conditions of the ACC loans, which has meant that they were largely not given to the intended women, and the limited emphasis given to the WDP programme in terms of staff training and external support. Since the project became effective, the MOA position has shifted, so that there is now a gender unit in the Ministry and a greater willingness to adopt participatory approaches. This suggests that the original design parameters for the WDP might be more acceptable in phase II.

97. **Gender Equity.** Overall, the mission found that there had been an effort to provide equal opportunities for both men and women in the project. The main concern however was not effectively reaching the target groups (male and female). Women beneficiaries confirmed that they felt more empowered in the household as a result of being income earners, particularly those that had no previous employment. However, it is unclear to what extent this represents a change in women’s social status as: (i) most women who received loans were already contributing to household income (even if they were retired); and (ii) many of these women were middle aged, and were less interested in changing their social interactions with men. The mission concluded that the enhancement in gender equity for beneficiaries could not solely be attributed to the project’s interventions.

98. Through the WDP, the mission considered that that project had been more practical than innovative in aiming to promote women’s economic participation and subsequently their social empowerment. However, the project has not contributed to or facilitate progress in gender sensitive policies.

99. Despite the above comments, more credit funds have been re-allocated to the IGA programme than originally specified. Even if they have not gone to the target group, they have been instrumental in enhancing household incomes through women’s efforts. Overall, the impact on gender is rated as 4.

**H. Sustainability**

100. **SWC and Agriculture.** On balance the IE concluded that the project SWC interventions would be largely sustainable after project closure. The on-farm structures completed by the project require little maintenance and are most probably sustainable in the longer term. Farmers met by the mission were generally very pleased with the improvements to their land, and appeared interested in undertaking whatever maintenance might be required. 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. There are maintenance requirements for the mini-dams, hafiras, check dams and gabions on State land as these are likely to silt up and may be damaged by intensive runoff. It is unclear whether this responsibility has been firmly accepted by MIWR, at present the project is arranging whatever maintenance is required. It is probable that the long term maintenance of these structures will remain a government responsibility, with little possibility of cost recovery from users.

101. The sustainability of the increased area under olives resulting from project activities may be threatened by a) low prices for olive oil; and b) high prices for groundwater (if farmers continue to buy groundwater for supplementary irrigation). The efficient operation and maintenance in the longer term of the improvements brought about by the project’s rehabilitation of springs and canals may also be threatened by the lack of formal community organisations (e.g. WUAs) to ensure the smooth running and maintenance of the beneficiary schemes. The new Field Units created in the Directorates could be retained post-project 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 and sustained. This really relies on addressing the wider issue of the need to upgrade the extension services if the government’s development thrust in agriculture is to be maintained or enhanced.

102. **Credit.** The appraisal envisaged the creation of a revolving fund that could perpetuate the provision of loans beyond project closure. Whilst a distinct account at ACC has not been established for this purpose, ACC verified its commitment to continue to provide loans to all eligible beneficiaries in the project area by going beyond the initial allocations for credit. As long as the credit line remains profitable for ACC, there is no reason why it should not be continued as a routine activity. Mission estimates are that despite the need for more consistency between loan duration and actual funding requirements, the activities undertaken are in general profitable for the borrowers, and hence will be continued. A possible danger is the narrow focus of the credit funds, the programme would be more robust if it did not rely so much on one main activity, which could be subject to changes in market demand or saturation of production.

103. The mission would conclude, therefore, that the present credit arrangements are largely sustainable. However, this conclusion should in no way detract from the wider consideration of who is benefiting from the credit. Essentially the present borrowers should graduate from the project subsidised credit arrangements and should be replaced by other more needy borrowers.

104. **The Women’s Development Programme.** Most women met by the mission were confident that they could continue their IGAs after project closure. Already, many are practicing their small enterprises independently of project support. However, until loan conditions are altered to be more accessible to poorer women, the WDP as presently designed will do little to alleviate poverty by reaching the target groups who are of most interest to IFAD.

105. **Institutional Strengthening.** The staff in the PMU are young and energetic and have received useful training and work experience during the implementation of the project. Staff capabilities and institutional capacity have been increased. The mission concluded that irrespective of the future of the project activities, significant institutional strengthening had taken place for the MOA.

106. The overall rating for sustainability is 3.

I. **Innovation and Scaling up**

107. Whilst the deep pruning of old olives cannot be said to be truly innovative, it has introduced a new technique into traditional practices and has proved to be very beneficial. This technique should be widely demonstrated and replicated wherever it is appropriate. To do this the techniques should be adopted as a standard recommendation disseminated through the extension services. Project areas may be used as demonstrations, but this activity should not require additional funding.
108. To an extent, the introduction of check dams was innovative. Even though this structure was not continued by the project, it does provide land use planners with another method of addressing erosion control. In order to slow runoff, particularly from high intensity rainfall, check dams can be useful. When sited upstream from more vulnerable mini-dams, they also serve to protect the dams. The requirement is for the usefulness and cost/benefits of check dams to be assessed, rather than check dams being dismissed as inappropriate to the circumstances in Jordan.

109. The project has already provided training to many women who could not take loans because they could not meet ACC’s conditions. Expansion and replication of the very successful IGA programme could take place if these women could be reached by an appropriate credit mechanism. This is an opportunity for scaling up to occur within the project area, at little additional cost.

110. The activity which requires to be scaled up to ensure sustainability and address a potentially serious environmental problem, is increasing the capacity and/or number of cisterns to match the need for supplementary irrigation in the areas of new planting developed under the project.

111. Overall, the rating for innovations and scaling up is 2.

J. Other Poverty Impacts

112. Mission discussions with MOA staff suggested that the experience of implementing ARMP had instigated a process in which the Ministry was re-thinking its approach to development projects. In particular, the emphasis for development within GOJ has shifted more towards ways of achieving poverty alleviation and creating employment – a strategy to which all Ministries are expected to contribute. For MOA, the successful experience with ARMP is the most appropriate initiative on which to build to help realize this strategy. The Ministry is therefore in the process of formalizing a new development strategy which will aim at poverty alleviation in the rural areas, including mainstreaming participatory approaches, using many of the principles incorporated in the design of ARMP. This represents a significant shift in emphasis for the MOA: at the time of the MTE a difficulty which was highlighted was the vision within the Ministry that its role was purely technical, and this was identified by the MTE as a major reason for the lack of participatory approaches in phase I. In addition, at the time of project design GOJ concerns with poverty were expressed directly through social support policies, implemented by the Ministry of Social Development and various NGOs: this was not seen as being the proper role for the MOA. Whilst this impact may not yet have been realised, it promises to be a significant factor in future planning. The rating for this sub-criterion is 2.
K. Overall Impact Assessment

Table 5. Summary Evaluation Ratings

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<thead>
<tr>
<th>Evaluation Criteria/sub-criteria</th>
<th>Ratings</th>
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<tr>
<td>Project performance</td>
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<tr>
<td>Relevance</td>
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<tr>
<td>Effectiveness</td>
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<td>Efficiency</td>
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<td>Impact on Poverty</td>
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<td>Impact on Physical and Financial Assets</td>
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<tr>
<td>Impact on Human Assets</td>
<td>3</td>
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<tr>
<td>Impact on Social Capital and Empowerment</td>
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<tr>
<td>Impact on Food Security</td>
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<tr>
<td>Impact on the Environment and Communal Resource Base</td>
<td>3</td>
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<tr>
<td>Impact on Institutions, Policies and the Regulatory Framework</td>
<td>2</td>
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<tr>
<td>Impacts on Gender</td>
<td>4</td>
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<tr>
<td>Sustainability</td>
<td>3</td>
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<tr>
<td>Innovation and Scaling up</td>
<td>2</td>
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<tr>
<td>Other Poverty Impact</td>
<td>2</td>
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<td>Performance of the Partners</td>
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<td>IFAD</td>
<td>3</td>
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<td>CI</td>
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<td>Government Agencies</td>
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<td>NGOs/CBOs</td>
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Source: Mission estimates

VI. PERFORMANCE OF PARTNERS

A. Performance of IFAD

113. The identification of the interventions and the appropriateness of the objectives have been discussed above under “relevance”. Whilst the design addressed key issues and supported the GOJ development aims, a number of difficulties have emerged during the course of implementation. The key areas were identified in the MTE as community participation, targeting and the credit mechanism. Briefly, the points highlighted were:

- **Community Participation.** Whilst the procedures to implement community participation were described in some detail in the appraisal, it was unclear whether they were acceptable to MOA. The project interventions proposed were 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.

- **Targeting.** The intended beneficiaries of the main intervention of SWC were poor farmers, but the design called for an area approach and provided benefits proportional to land holding. For olive rehabilitation there was actually a lower limit of land area specified. For credit, the collateral conditions were known to exclude the poorest. These are strange targeting criteria for a project which has as its main aim poverty alleviation, and proved impractical to apply during implementation.

- **Credit.** Difficulties relating to design in the credit interventions were that: (i) credit alone was never an appropriate mechanism to address the problem of land consolidation; (ii) the credit activities could never be fully integrated into the other project interventions because of the strict beneficiary selection criteria; and (iii) the arrangements under which funds were
to be repaid by ACC made them reluctant to undertake any institutional strengthening activities: this was known at the time of design.

114. These difficulties were highlighted by the MTE, which went to some lengths to suggest how they could be addressed in the second half of the project: they were also incorporated in the ACP of the evaluation.

115. The Terms of Reference (TORs) for the IE were directed towards updating the findings and conclusions from the MTE. As a starting point the mission assessed the progress and actions taken on the agreements reached and associated recommendations as recorded in the ACP. Overall, the project management has attempted to respond to many of the ACP recommendations when it was specifically within their remit to authorize the changes\(^9\): the same cannot be said for MOA or ACC, which made almost no moves to address the issues raised or agreements reached in the second half of ARMP. (However, in some ways these recommendations can be seen to have been incorporated in to the design of the Yarmouk project.)

116. The mission concluded that there had been little follow up of the MTE recommendations or the ACP agreements by IFAD (or the CI). A significant opportunity for follow up existed in ARMP because of the re-allocation of funds that took place after the MTE. This conclusion also influences the assessment of the performance of the Government agencies.

117. In assessing IFAD’s performance overall, the mission concluded that whilst the intentions and relevance of the interventions could be rated very highly, there were some aspects of the design which were poor – especially the targeting criteria and the practical aspects of the implementation approach for community involvement and participation. The arrangements for the involvement of ACC also did not offer any progress in terms of enhancing the outreach of credit to the poor. In the language of the MFE (IFAD’s Methodological Framework for Project Evaluation) overall IFAD facilitated a design which “did the right things”, but did not continue to ensure that “the right things were done right”. On balance the mission decided to rate the performance of IFAD as 3, but this is marginal.

### B. Performance of the Cooperating Institution

118. Project records indicate that the CI (Arab Fund for Economic and Social Development - AFESD) made five visits to supervise implementation and that there have been at least five IFAD follow up visits (excluding visits for purposes other than supervision). PMU staff indicated that they had found these visits useful and had instituted a formal process whereby they reported to the PSC the actions taken in response to recommendations from the supervision missions. They also reported that the CI had effectively solved financing and procurement problems for the project. Overall, the mission concluded that the CI had performed well in supporting project implementation, but shared responsibility with IFAD for not pursuing progress with the issues described above. In all fairness, AFESD is more concerned with ensuring financial probity and does not become involved with the more “technical” aspects of implementation, nor with the required emphasis on social aspects targeting the poor, e.g. poverty impact, participation and gender aspects. The performance rating for the CI is 3.

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\(^9\) Participatory approaches were adopted in some instances for spring rehabilitation, and the position of Community Development Officer was reinstated, but no external assistance was sought to develop such approaches. This apparently reflects the MOA reluctance to use loan funds for what it sees as technical assistance, even though the Ministry has no internal capacity for the specializations required (group formation, community development etc).
C. Government and its Agencies (including project management)

119. Ministry of Agriculture. Overall, the arrangements made by MOA for project implementation have proved very satisfactory. MOA has also facilitated the adequate and timely release of counterpart funds. The only difficulties experienced during implementation relating to the MOA have been: (1) the reluctance to change Ministry operational arrangements to meet the implementation mechanisms as specified in the loan agreement; and (2) the reluctance to use loan funds for TA or for contracting skills through NGOs etc. The lack of effective follow up of many MTE recommendations is considered to be shared with IFAD and the CI, especially as these relate to ACC operating procedures.

120. Project Management Unit. The PMU has proved a very effective mechanism for project implementation. This is demonstrated not only by the physical achievements of the project, but by the very pragmatic way that problems have been overcome and the decisive management involved in the modification of project targets at mid-term. The staff have been well trained and have been built into an enthusiastic team. The success of the project owes much to the dynamism of the PMU, and this has heavily influenced the overall rating for government agencies.

121. Agricultural Credit Corporation. The ACC has been an effective partner in terms of disseminating the credit funds, but cannot be said to have contributed much to the achievement of project objectives. This is not necessarily the fault of the ACC, as the modus operandi of ACC were known to the design team but, as described above in the performance assessment of IFAD, there was little attempt in the design to ensure that ACC would act to modify its lending conditions to reach the prescribed target groups. This also applies to the use of loan funds for institutional strengthening for ACC. This was a missed opportunity, as ACC now has no experience of alternative credit mechanisms for reaching the poor.

122. NCARTT. The role of NCARTT is somewhat unclear. Whilst SWC demonstrations have been established, it does not appear that NCARTT has been central to the development or adaptation of technology for use in the agricultural modernization programme envisaged as a requirement of ARMP.

123. Overall, the performance of the government agencies is rated as 3.

D. Performance of Non-Government and Community Based Organizations

124. Despite the inclusion of funding for NGOs, in practice no NGOs (or Community Based Organizations - CBOs) have been partners in the implementation of ARMP. NGOs have been involved solely as contractors to undertake some training activities (see implementation progress of the women’s programme).

VII. OVERALL ASSESSMENT AND CONCLUSIONS

A. Participation

125. Community Development. The aim of the intended community development in ARMP was to strengthen the institutional capacity of the target groups, enabling them to organize and pursue self-sustaining resource management, agricultural development and off-farm IGAs, and encouraging them to take responsibility for and ownership of these activities. The design envisaged that a comprehensive participatory approach would be an integral part project implementation from the outset. For SWC activities this was to be through groups of farmers requesting the development of complete physiographic units, whilst for spring and canal rehabilitation this was to be through existing and newly formed village based groups who would benefit from the enhanced water supply. In the case of off-farm water storage and erosion control measures, little was said about the possibility of community management and maintenance of the facilities created, whilst for women’s
IGAs there was an inherent intention that groups would be formed for collective production and marketing. The participatory approach requires that beneficiaries be involved in the planning stages of the project, and aims to instil a sense of involvement, responsibility and ownership. This cannot be narrowly compared to simply asking for financial contributions. The end results sought from a successful community approach would not only entail improved sustainability of the facilities and benefits generated by the project, but also greater orientation and mobilization of the rural poor to continue the development process through self-help activities.

126. In practice ARMP chose not to adopt participatory approaches, although the staff were sympathetic to the development objectives being sought. The reasons for this have been comprehensively addressed in the MTE, but to these the present mission would also add that in many of the communities found in the project area participation and decision-making are patriarchal (hierarchical) rather than participatory. In its recommendations the MTE provided detailed suggestions as to how progress might be made with addressing participation in the second half of the project. Key features that the IE would stress were:

- Commitment from the MOA for the adoption of participatory approaches;
- The appointment of community development staff to oversee the implementation of a participatory approach;
- The selection of an NGO to assist in the training, community organization, and group formation for IGAs;
- The training of trainers and beneficiaries in participatory approaches and community organization.

127. Following the MTE recommendations, the position of Community Development Officer has been reinstated, and this has gone some way towards helping to promote a community-based approach in the spring and canal rehabilitation activities. However, the two staff members concerned are engineers by profession and no training has been provided for them in community participation or group organization. In practice their approach has been limited to focus group discussions about farmers needs. Overall, they lack the skills to develop and apply a methodological and systematic community participatory approach. Even if these two individuals had been trained, it would have been virtually impossible for them to conduct these activities effectively without additional support.

128. Despite these comments, the mission was able to find and interact with existing local groups, see the examples in Box 1.

129. For poor rural women group formation can assist with the dissemination of information, the sharing of risks inherent in IGAs and the lowering of production costs, the sharing of working time and more efficient marketing. Despite these well-known advantages group formation has not materialised in the women’s programme of ARMP. The IE concluded that this was a result of:

- The lack of training in community participation or group formation for the extension agents concerned with the programme, combined with the failure to contract appropriate NGO support.
- Resistance from the women beneficiaries to working collectively: this probably reflected the relative affluence of the women, plus the lack of the appreciation of the value added in collective work.

10 Neither was gender-awareness included in their activities.
Box 1: Examples of Group Activities in the Project Area.

1. **CARE Groups.** The mission was able to find and interview committee members from some of the associations formed in the early days of the project as a result of the NGO Extended Cooperation Programme (ECP) grant provided to CARE, which was intended to demonstrate possible group formation techniques. They confirmed the benefits of working collectively in spring rehabilitation, however, there seemed little in the way of ongoing or further self-help initiatives. Instead, the members were more interested in addressing the additional needs they felt should be met by the project.

2. **Community Cooperatives.** In Tafila the mission met with a community cooperative in Al-Ayna and a community association in Al-Ruwaym, both established independently of ARMP. In these groups meetings are held regularly to discuss problems concerning prioritising needs and mobilising resources for SWC activities. The Al-Ruwaym association also has a community centre, donated by JOHUD, which services five villages that comprise mostly very poor farmers. Their activities demonstrate a demand driven approach whereby a work-plan is prepared annually and grant proposals are submitted to charity organizations and NGOs. This association also includes a women’s section of 25 members who have their own office and working space (in the same centre). The women meet once a month and prepare their own annual work plans for the group. Women could also apply as individual or as a group, for seed capital for IGAs, and have access to small interest-free loans.\(^\text{11}\) The women interviewed in this association were making profits from their various IGAs, 20\% of which is given to the association’s revolving fund.\(^\text{12}\)

10. At the policy level, the GOJ has recently identified community participation and organization as a key approach for its poverty alleviation strategy. In response, the MOA has now stated its commitment to including community participation in all its agricultural development programmes. However, the Ministry has not yet articulated how this will be achieved. The recommendations of the MTE describe a very appropriate mix of practical approaches that could have been applied to the second half of ARMP, and which remain valid for use in the second phase. It must be emphasised that the varied nature of ARMP interventions and target groups means that a single approach to participation is not appropriate, rather approaches have to be designed for each activity. In order for the Ministry’s initial experience with participation to be given every chance of success will require considerable assistance and support; the difficulties involved should not be underestimated.

11. **Targeting.** Much has already been said about the targeting of interventions in ARMP. The practical interpretation of targeting criteria can be a challenging task in poverty alleviation interventions and requires substantial experience, or appropriate support: in phase I the PMU staff had neither, but the targeting mechanisms were particularly complex. The original intention of identifying poorer areas and then, within these, developing complete physiographic units was a logical approach to solving the technical problems of implementing SWC activities. However, further criteria relating to limitations of the sizes of land holdings undermined the ability of the project to adopt this approach from a practical viewpoint. In effect, inclusion was through self-selection under these arrangements. Other targeting criteria were then introduced for different interventions, some of which tended to exclude the poorer groups, e.g. the land size for olive rehabilitation and the conditions for loans for IGAs.\(^\text{14}\)

12. Whilst settled smallholders may have benefited in proportion to their land holdings, groups such as landless farm workers, who probably constitute the poorest rural group, have not been touched directly by the project, though it is possible that they benefited from extra employment in the implementation of SWC and tree-planting activities. The degree to which herdsmen have

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\(^{11}\) For example, two sisters knitted children clothes, while another bought women clothes at wholesale and sold them in her village. Others, who had received training in the Women’s Programme, were involved in food and dairy processing.

\(^{12}\) This is a substitute for paying loan interest which they would not take which violates their religious practices.

\(^{13}\) Poverty Alleviation for a Stronger Jordan, (May 2002).

\(^{14}\) However, some targeting criteria were positive. For example, the project exempted female head of households from the minimum land criterion and this encouraged their participation.
benefited from the project’s off-farm SWC structures (mini-dams and hafiras) is difficult to quantify because this was not investigated before deciding on the siting of structures. (In the interest of balance between settled farmers and herdsmen in respect of future benefits in Phase II, it is important that more efforts be made to quantify the economic, social and environmental impact of the off-farm SWC interventions.) In addition, the credit conditions effectively excluded many poorer women.

133. The conclusion reached by the IE was that ARMP’s outreach to the intended target groups and ability to involve them as beneficiaries had been weak. Inclusion or exclusion as a project beneficiary had become both confusing and rather arbitrary, and there did not seem to be many factors which tilted the benefits towards the poor. If a clear focus on poverty alleviation is required, then what is needed is a much clearer statement of intentions in the design as to who exactly should be included in the target groups. This also needs to be very practicable. From the IE’s limited fieldwork it appeared that the interventions, which had the most chance of really reaching and bringing benefits to the poor, were the spring and canal rehabilitation and the provision of water to herdsmen on State land. This would need to be confirmed by further surveys, but does suggest that a simple and practical targeting approach may be to re-balance the division of resources so that the greater proportion of IFAD funds is biased towards these activities.

B. SWC and Agriculture

134. The mission concluded that there have been substantial achievements in most of the major objectives of both the SWC and the agricultural development components:

- Degradation of land and water resources has been reduced or arrested on both public and private land where project interventions have taken place. The project’s Resource Management and Agricultural Development activities have, to a significant extent, achieved their objectives.
- There has been a shift from cereal to tree crop production on sloping land, with the consequence of improved conservation and the potential for improved farmer incomes.
- Rangeland grazing and water access has been improved.

135. The objective of optimising the long-term productive use of the land and water resources still needs to be addressed in the light of the continuing dependency of most project farmers on abstracted groundwater for their supplementary irrigation. In addition, the aim of closer integration of crop and livestock production has not been achieved to any great extent; it is, however, of less concern than the issue of groundwater abstraction.

136. Some issues, unforeseen at the time of appraisal, pose a threat to the sustainability of the improvements achieved so far. These include the reduced price of olive oil, the increased reliance of growers on purchased groundwater for supplementary irrigation, and the lack of formally structured WUAs on communal irrigation schemes. More attention could have been given to a quantification of the social, economic and environmental impact of the off-farm SWC interventions.

C. Credit

137. The most important conclusion about the credit activities in ARMP is that the poverty reduction intentions expressed in the project were never likely to be reached through the design of the credit programme. In addition, there was a lack of full appreciation of what the credit activities could achieve, shown by the allocations between categories (i.e. 67% was intended for land consolidation and supplementary SWCs, and only 33% was for women’s IGAs). The restrictive nature of ACC lending conditions, which was known at the time of design, were also always going to restrict the selection of potential beneficiaries.
138. In terms of the disbursement of credit funds, the mission concluded that ARMP had been very successful. Apart from virtually 100% funds disbursement, over 90% of the total loans, and 80% in terms of absolute value, have gone to women. Overall, these loans appeared to have been very profitable (more so than at the time of the MTE), especially for the most popular activity, dairy processing. The mission concluded that the programme overall had had a significant impact on household incomes for over 1,000 beneficiaries (260% of target). The high repayment rate on these loans (89%) has meant that the exercise has been profitable for ACC and is a good indicator of sustainability of the programme, even though ACC has not actually established a revolving fund for this purpose. However, the mission concluded that one reason for the high repayments had been the lending conditions (specifically the availability of salaried guarantors and the automatic monthly deduction of dues), which meant that borrowers predominantly came from the less poor groups.

139. Overall the mission also found that there had been a distinct disconnect between the credit and other activities in the project, whereby ACC branches are operating the credit activities largely, independent of the wider aims of ARMP. One reason for this is that few loans went for agricultural activities (e.g. land consolidation or SWC). The intended institutional strengthening and other support for ACC has largely not been realised largely because of ACC reluctance to use loan funds for this purpose. Even after the clear recommendations and agreements reached as a result of the MTE, no effective actions were taken.

D. Women’s Programme

140. The mission concluded that the WDP had achieved its objective of increasing family incomes through IGAs, and overall could be considered as a successful intervention. The outreach has been very creditable, especially given the under-staffing of the Unit, and has demonstrated the popularity of and need for the credit which was made available. In addition, the provision of skills training pre-credit has enhanced the capacities of a very large number of women, much more than was ever planned in the design, and this will bring its own longer term benefits, even if credit is not provided. The mission found that most of the IGAs appeared to provide useful levels of additional incomes and were also likely to prove sustainable, without further project support.

141. Whilst these conclusions are all very positive, it is of concern and has been openly acknowledged that the intended target group of poor women has not been reached, at least with credit. This detracts from the success of the component as a poverty intervention. In addition, the IGAs are frequently seasonal, and require considerable increases in workloads for short periods. The mission was also concerned at the lack of progress with the development of suitable participatory approaches or group formation activities, both of which could provide the basis for including the poorer elements. The challenge in the new phase of the ARMP, therefore, is to replicate the successful aspects of the WDP whilst ensuring that it is fully inclusive of the intended target groups. This will almost certainly require the adoption of a participatory approach from the outset with the careful and skillful promotion of group formation processes.

E. Institutional Strengthening

142. The mission concluded that the extensive and very comprehensive training programme provided for project staff had been instrumental both in increasing capabilities and fostering good team spirit. Similarly, considerable training has been provided for beneficiaries, especially through the women’s programme, whilst farmers expressed gratitude for the support provided by the project’s extension agents in terms of technology transfer (e.g. the deep pruning of olive trees). However, whilst skill levels may have been deepened, they have hardly been broadened, as little use has been made of the funds included for NGO support, research and studies. This has acted to limit the implementation of the project in the ways envisaged in the appraisal, especially in terms of developing participatory approaches and widening the scope of IGAs. The effects of this are likely to be felt in the ability of project participants to continue and sustain their own development agendas. The concern of the mission is that the Ministry has been unconvinced of the need for these
activities, and will not implement them in other ongoing or future projects, even though they may be integral to the design and documented in the loan agreements.

F. Coordination and Management

143. The mission concluded that the project implementation mechanisms had largely been very effective, and had contributed both to the extent of the project achievements and the dynamic nature of the processes created. However, the mission would comment that there is a need to arrange for a handover mechanism, so that completed areas and activities are on-passed to District based officers for routine follow up operations. This was supposed to be incorporated in the decentralized approach to implementation, but hardly occurs at present. In fact, given the very limited beneficiary participation in project planning, ARMP is actually very much a centrally controlled project, and is presently seen in the project areas as a Ministry-owned initiative. Part of the reason for this is the weakness of the extension services at the District level – this is addressed under the recommendations for SWC and Agriculture – and part is the result of the limited authority of the RACC. This suggests that the decentralization objectives of the project should be reinforced in future.

144. In terms of coordination, the mission foresees a need to strengthen the role of the ACC as an implementing partner. At present credit activities are divorced from the central soil and water conservation objectives and activities and the PMU and ACC manage their separate aspects of the project on parallel tracks, without clear common objectives. Their roles need to be much more closely integrated if the focus on the target groups is to be maintained and if the poverty alleviation interventions are to be maximized. This is addressed in the Credit recommendations.

145. The mission concluded that there was much to be gained from enhancing the two-way flow of information, ideas and people between the PMU and the specialist Departments in the Ministry. This would provide enhanced technical support for the project and would encourage the dissemination of the methods and processes developed for ARMP in other areas.

146. During the implementation of ARMP a very impressive M&E system has been developed, almost without outside help. The system has also been adopted by the Yarmuk project. The mission found that project reports were being used as the basis for making management decisions, and the database proved very valuable to the evaluation. With the introduction of a project logframe for phase II it will be necessary to modify the approach and design of the current M&E system somewhat to permit the clearer identification of impact indicators and to allow for the streamlining of the system. However, it will be vital that these changes are accompanied by adequate training and support for the staff (especially in terms of understanding and use of logframes) in order that what is an excellent system is not damaged.

VIII. INSIGHTS AND RECOMMENDATIONS

A. Participation

147. In the second phase ARMP could make a significant contribution by assisting MOA to apply participatory approaches in its poverty alleviation and agricultural development efforts. What is needed is the adoption of a strategic approach to participation and its mainstreaming at all levels within the Ministry. In doing so the following steps should be considered:

- Assist MOA to mainstream participatory approaches throughout the Ministry. This might include funding a series of workshops and a sensitization campaign (similar to that conducted for establishing the Gender and Development unit), and provide TA for training trainers in the Training Department of the MOA.
• Conduct a study within the designated project areas that analyses the arrangements for and impacts of traditional (village development committees) and more modern community associations (or other group formation mechanisms) and identifies mechanisms that have proved effective for the mobilization and participation of rural poor communities.

• Provide training for the appropriate PMU staff in community development and group formation, including study visits to other IFAD projects where community participation and organization have been successful.

• Contract a specialised and experienced NGO to backstop, train and monitor the implementation of the community participatory approach and community mobilization and organization activities.

• Provide education for beneficiaries in community participation, assist beneficiaries to mobilise to form village development committees and give consideration to the provision of community development funds.

• Ensure beneficiary participation in the planning and monitoring of project activities.

148. These recommendations closely follow those of the MTE. The IE would fully endorse the further explanations of the necessary steps for each activity as described in the MTE.

149. **Targeting Mechanisms.** In order for the poverty focus of the project to be improved it is necessary to sharpen and clarify the targeting mechanisms. In the design of the new phase consideration should therefore be given to directing resources specifically towards the poorer groups, learning from the experience of phase I. This might take the form of increasing the emphasis on, for example, spring rehabilitation and the support to herders. Alternatively, co-financing might be sought for those activities which are unlikely to reach the poorer groups – in this case the obvious candidates would be the on-farm SWC activities and the individual loans for women’s IGAs.

150. A lost opportunity in Phase I was the lack of reaching the target group for micro credit and IGAs. However, micro-credit for poorer women may not be the best strategy for reaching this group and therefore Phase II needs to reconsider alternative strategies. For example, targeting poor women may be better achieved by forming women’s groups and then offering credit to the group, rather than individual loans. Indicators should be included, and regularly monitored through the M&E system, to assess the extent to which the targeting criteria are being achieved.

**B. Water**

151. ARMP has helped GOJ successfully to realise some of its agricultural and natural resource development objectives. The Ministry has already identified many more areas where a similar approach could be replicated (reportedly 1.7 million du). However, the limitation is not land availability, rather, it is water. The acute scarcity of water has been given particular emphasis in the present Country Strategic Opportunities Paper (COSOP), yet the evaluation came to the conclusion that whilst the project has contributed to water conservation, it has not actually focussed sufficiently on the crucial aspect of water management. To continue the GOJ development strategy of promoting income generation and employment in the rural areas, improvements in the efficiency of water use in agriculture need to be given the highest priority.

152. **Water Purchases.** Most purchased water in the project area comes from private wells, all of which appear to tap in to the same aquifer (B2/A7) in the Dead Sea Basin. This aquifer is already described by the Water Authority as being “severely depleted”, and any additional abstraction will accelerate this depletion: this is totally contrary to the conservation objectives of the project. The impact in terms of lowering the water level in the aquifer may be quite small, but it is certainly
negative. Discussions with growers suggested that most buy between 50 and 200 m$^3$ of well water in a normal year. Hence if 2700 growers were each to purchase an average of 75 m$^3$ every year, this would abstract more than 200 000 m$^3$ a year from the aquifer. This raises two issues. The first is the environmental impact of extra abstraction which may or may not be significant. The second, and possibly more important issue in the short term, is growers’ reliance on a diminishing resource that could become prohibitively costly. Already the financial returns to olives have diminished substantially since the beginning of the project as a result of falling oil prices. If this situation were to be exacerbated by increased water prices, growers would tend to irrigate less, yields would decrease, and large areas of olive grove could be at risk of being abandoned. Given the fact that the project is in a marginal agricultural part of a seriously water-deficient country, this scenario is not necessarily alarmist. The mission would therefore recommend that:

- The design principle adopted should be to ensure that farmers’ supplementary irrigation requirements can, in a normal year, be met by harvested run-off water only.

153. **Cistern Capacity.** The present capacity of the cisterns (30 m$^3$) is almost invariably too small for the supplementary irrigation requirements of the olives planted in response to their construction. The result has been that farmers now purchase more water from commercial wells (which they store in their cisterns), in order to make good the shortfall for supplementary irrigation. In recognition of this fact, the project has already proposed, for Phase II, to include a sliding scale for cistern capacity so that it is related to the area to be planted. The proposal is that a maximum of 10 du of olive trees should be planted for 30 m$^3$ of cistern capacity, with each additional du being eligible for one extra m$^3$. If a farmer wanted to plant 12 du, he would therefore be eligible for a cistern of 32 m$^3$. It is not clear that this would not actually exacerbate the problem, since the first ten du of planting are provided with three m$^3$ each, which is known to be inadequate, whilst each subsequent du planted get only one m$^3$.

154. A further disadvantage of the proposed approach is that a reduced water allocation for extra trees may lead farmers to believe that the allocation, since it has been sanctioned by the project, will be sufficient for their requirements, whereas in fact it will not, and they will again find themselves purchasing water. While it is acknowledged that the approach may have, as part of its objective, the discouragement of farmers to over-extend their holdings at the expense of the project, the mission recommends that:

- The project take steps to estimate cistern capacity based on more precise water-requirement information.

155. **Water-use Efficiency.** The mission found that there was considerable variation between farmers in the frequency of irrigation and in the amounts of water applied, suggesting that both over-irrigation and under-irrigation may occur. It appears that farmers depend on their experience when deciding when to irrigate their trees and how much water to use. This may be acceptable when such experience exists and when it is in harmony with tested best practice for efficient water use. However, it is extremely important in the context of a project in a low-rainfall area that farmers, irrespective of their level of experience (and it should be borne in mind that some of the project’s beneficiaries come from non-agricultural backgrounds), have access to clear guidelines and recommendations regarding efficient water-use practices. At present, area-specific recommendations do not appear to be readily available to growers. The mission would therefore recommend:

- The project should ensure that all growers are informed about and receive guidelines for supplementary irrigation practices for olives and other fruit trees, so as to ensure an optimum economic balance between yield and water use. These guidelines should be quantified for trees at different stages of maturity on the various soils in the project area in a normal season.
• If appropriate guidelines, applicable to project circumstances, do not exist, or if they need to be refined, the project should enlist the collaboration of NCARTT specifically to formulate and develop them.

156. **Water User Associations.** Although the project reports that it has assisted in the formation of eleven WUAs, the mission encountered considerable confusion amongst groups that it met concerning members’ responsibilities, obligations and benefits. In support of the status quo, it was argued that many of the groups had existed for decades or more and were capable of managing their activities on an *ad hoc* basis. However, the fact that the spring and associated olive grove rehabilitation interventions were able to improve the lot of these groups considerably, suggests that this is not necessarily so. In addition, following the project’s intervention, the communities’ water management groups must now equip themselves both technically and financially to deal with different water control methods and materials, such as concrete canals and metal gates. The traditional water allocation systems, based on time, may also need adjusting because of the much greater flows and reduced losses recorded from the springs and canals. Since it is still early in the life of the rehabilitated systems, evidence of physical deterioration resulting from poor management is only just beginning to appear. However, bent and unusable metal gates, unrepaired concrete where a canal had been hit by a vehicle, and weedy canals were all observed by the mission. It should be stressed that although the deterioration seen was slight, it suggests the lack of a mechanism to address maintenance.

157. Water User Associations\(^{15}\) should have mechanisms and funds to address these issues almost automatically. At one scheme, some users complained to the mission that their water allocations were unfair, and asked for the project’s assistance in the matter. This indicates a failing; by the time the project has handed over a scheme to a WUA, the WUA should be equipped to deal internally with all such eventualities without further project assistance. In some countries, donors insist on WUAs drawing up an acceptable constitution defining the administrative structure of the group and the responsibilities and benefits of its members before any financial assistance is provided. This also seeks to ensure the proper maintenance of the schemes, protecting the investments made in construction. Water User Associations can also provide a valuable “entry point” in terms of greater participation from the community, and facilitate community management of a common resource. Such an approach would be worth considering in Phase II.

• It is recommended that more attention be paid and resources allocated to the formation and structure of water-user groups (WUAs) on communal irrigation schemes that have benefited or will benefit from project support in the form of spring and canal rehabilitation.

C. **Agricultural Extension**

158. Jordan’s agricultural extension service is seriously under-staffed and its effectiveness is consequently compromised. This presents a problem in terms of the continuing support required by farmers in order to fully realise the development potential from improved land and water resources. At the moment the extension agents working with the project appear to have to continue their activities with an ever-growing portfolio of clients. There is a need to address the handover of completed areas for regular support by extension agents within the FDAs. The difficulty in doing this is both in terms of staff numbers and equipment.

159. The mission concluded that consideration should be given to providing assistance from project funds to the Agricultural Directorates in the project areas. Such assistance might take the form of vehicles, equipment, training and operational allowances and should cover both crop and livestock activities. The intention of this investment would be to enhance the flow of benefits from project

\(^{15}\) This term is used by the mission in its widest sense; it is not being argued that new organisations should be established for this purpose, just that specific responsibility for water distribution and maintenance of the structures should be taken by a recognised community organisation.
activities, so that over the course of Phase II the extra investment could be economically justified. The danger would be that, come the end of the project, the benefits would be dissipated; administrative exigencies might, for example, dictate that staff or vehicles be transferred to another department, or that office facilities be reallocated. The risks of this approach should therefore be carefully balanced against the short-term and possible long-term benefits. The mission would recommend that:

- Consideration be given to formalising a hand over procedure for completed areas and structures developed through the project to the respective Directorates of Agriculture, and in conjunction with this;
- Consideration should be given to providing support from project funds for the extension agents in the FDAs.

D. Credit

160. As designed the credit programme in ARMP reflected a narrow view of the role of credit in rural development. As with the practice followed in subsequent projects (e.g. Yarmuk) in a second phase of ARMP, credit needs to be given a more central role and to be considered in the wider view of rural financial services, following IFAD’s policy guidelines (which had not been developed at the time of the original design). To evaluate the credit achievements, therefore, it is necessary to understand the parameters which led to the design proposals at the time. The most important of these was the long history of IFAD’s association with ACC as a development partner, and the inherent assumption that ACC would be the credit provider in ARMP. This being so, there was no possibility, at that time, of including the necessity for savings or the distribution of loans through intermediary groups. ACC lending terms and conditions were also known to be conservative in nature, which is probably very wise when it comes to small-scale lending for rainfed agriculture in a water deficit country. The possibilities for being innovative in ARMP were therefore bound to be limited in the mid-1990s.

161. Fortunately, circumstances have now changed, in that there is now much stronger GOJ commitment to addressing the issues of poverty in the rural areas. ACC should therefore, play a key role in any MOA development strategy, as it remains the only formal organisation able to provide financial services to producers in the rural areas. The need, however, is to identify the mechanisms through which ACC can grow into a much more broadly based lender, to contribute effectively in enabling the rural poor individuals and groups who need ACC services to overcome their poverty. Despite the achievements and successes in ARMP, the limitations demonstrated show that there is still some way to go. What is required is a process of “transformation” to considerably update the approach and thinking within the organisation and to benefit from other proven effective rural financial services approaches.

162. Notwithstanding the significant achievements of the credit activities in phase I, the mission makes the following recommendations both to strengthen credit implementation and to widen outreach in phase II:

- To ensure on-going and effective coordination between ACC and the project, as well as to endow the project with 'credit expertise' so that it might play a more effective role with regard to credit outreach and monitoring of IGAs, a distinct credit unit should be established within the project. Consideration should be given to the project meeting the costs of a full time officer seconded from ACC to head this Unit, plus training for all the Extension Officers within the project in assessing credit needs.

163. This recommendation is intended to improve linkages and coordination between the PMU and ACC branches, as well as providing a mechanism for monitoring credit utilization. It is consistent with both the recommendations of the MTE and the structure adopted by the Yarmuk project. It is
assumed that in phase II the purposes for which credit would be made available would be closely aligned to the overall project objectives, especially in terms of poverty alleviation. Hence the design would ensure integration of the credit programme into the overall project objectives.

- A minimum of 10-15% of credit allocations should be designated for a pilot innovative mechanism of group credit provision suitable to the socio-economic conditions of the rural poor. This should be administered by ACC, but channelled through local level organisations, or sanadiq whenever is suitable to the local conditions and culture. This new mechanism should be created in the project area for the purpose of providing loans to the most disadvantaged households who cannot meet the present collateral requirements. These new organizations/ sanadiq should be established by the project’s credit coordination unit, trained by subcontracted parties (NGOs) and should operate under the joint supervision of the PMU and the ACC.

164. This recommendation addresses the necessity for innovation in phase II. The new poverty window developed by ACC serves to extend the existing individual loan mechanism but at lower interest rates, while it is no doubt an improvement over past practices, it does not go far enough in addressing the needs of the poor. The mission is convinced, and it is IFAD’s global experience, that until a group based approach is developed for lending, the poorer will never truly be reached. Regional experiences of such sanadiq (for example in Syria the ongoing projects in Jebel-al-Hoss and Idlib) confirm that a high recovery rate can be combined with outreach to the poorest members of the rural poor, provided that they are adequately organized, trained and supervised. Further descriptions of sanadiq and the method proposed can be found in Appendix 4 as an example of a possible innovative mechanism to be introduced in phase II. This should also result in a credit mechanism which, at least in part, would be more in conformity with the principles in IFAD’s Rural Financial Services (RFS) policy. This means that:

- In order to reinforce the overall participatory approach in the project, the credit aspects of phase II should include the possibility of utilising the services of a prominent NGO in the field of micro-finance to provide the skills which are not currently available.

165. The above recommendations imply an element of institutional support for ACC. The intention of this support is to share the risks with ACC in accepting the challenge inherent in administering the innovative pilot mechanisms. In previous arrangements ACC has been reluctant to utilise loan funds for this purpose, in fact this applies to the overall policy of MOA with respect to training and technical assistance. As there are signs indicating an increasing willingness to accept new challenges, the second phase should be an opportunity for ACC to acquire support from an organisation that has positive experience in anticipating and addressing the difficulties which will arise. This critical aspect needs to be clearly addressed in phase II, and should be the subject of follow up throughout implementation. For example, the logframe needs to include indicators which report the progress in developing these pilot mechanisms.

166. The above recommendations recognise that between 85-90% of the credit funds would be directed to individual loans, as in phase I. For these funds in particular the mission concluded that the following needed to be enshrined in the loan agreement:

- ACC will undertake to develop a means of establishing a more coherent relationship between the size and duration of loans on the one hand, and the purposes for which the credit is to be used on the other.

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16 For an overview of NGOs in Jordan active in micro-finance see “Restructuring of Agricultural Development Banks: the Case of the ACC in Jordan” Michael T Marx, April 2003.
E. Women’s Programme

167. Income Generating Activities. The IGA programme has proved to be impressively successful in Phase I, demonstrating a useful mechanism for increasing family household incomes. Even where IGAs have not actually been started, the training provided has almost certainly been beneficial, possibly representing a further stream of benefits which the project might do well to assess. The present WDP provides a building block for phase II, but should not just be copied. Rather, the need is to improve a number of aspects. Firstly, the success of the IGA programme may be somewhat vulnerable because it has been built on a very narrow range of activities, and does not have much technical backstopping. Secondly, the project has paid little attention to the need for capacity building in terms of developing self-help skills and group working – these are needed to enable beneficiaries to drive forward their own livelihood developments independently of project support. Finally, and in order to encourage group working and social cohesion, the project should consider sponsoring women’s centres, where training and group activities can take place. The mission would therefore recommend:

- **Feasibility and Marketing Studies for IGAs.** The range of IGAs should be expanded after feasibility and marketing studies which seek to identify products that have market demand and are financially viable. These studies should be wide ranging and include small-scale group production. They will probably require some form of TA, both for the studies and to continue to backstop the activities identified. For example WDP officers and some beneficiaries have suggested bee-keeping, growing mushrooms and medicinal herbs.

- **Capacity Building for Beneficiaries.** Phase II should give more emphasis to capacity building for beneficiaries. This would include training in the organization of collective working, administration and marketing skills.

- **Women’s Centres.** The necessity for women’s centres is twofold: first, it would be more cost efficient for poor women to work collectively by sharing equipment, supplies and storage space rather than each working separately (e.g. from home where space and resources are limited for larger scale production activities). Second, a women’s centre would assist in institutionalising women’s groups.

168. The logistics and the financing of women centres would require research during the design of Phase II in order to identify cost-effective options. One suggestion made was that WDP officers apply for grants from local NGOs who are known to assist projects for the poor. For example, in Al-Ruwaym, a community centre has been constructed by the Jordanian Hashemite Foundation. Another option might be a community participatory approach, i.e., the community provides a small property and labour, whilst the project covers the cost of rehabilitation, equipment and furniture. Such a centre could then function as both a women’s centre and a community centre, and would help to realise the project’s implementation strategy of community participation and group formation.

169. Group Formation for Women. In order to reach poorer women it will be necessary to encourage group formation, before moving to suggesting IGAs. There are several advantages to group approaches. Firstly, poor women are usually keener to participate when the risk is shared with other women from similar backgrounds. Secondly, once established as viable enterprises with suitable track records, the groups could apply for loans for expansion from the formal financial sector. A pre-requisite to ensure the sustainability of women’s groups small enterprises is the presence of an NGO with local experience in group formation and IGAs to provide the necessary support services. A possible approach might be to assist poor women to form producer cooperatives and to provide seed capital from the project (to be repaid in cash or in-kind) to start IGAs. The mission would therefore recommend that:

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17 There are several NGOs in Jordan with such experience such as CARE and the Nour al-Hussein Foundation.
• An experienced local NGO be contracted (i) to train WDP officers to apply participatory approaches methodically and (ii) to help establish women groups for small enterprises. The training for beneficiaries should include education in participatory approaches, the benefits of collective work and capacity building (administrative and financial). Once the WDP officers master these skills they can continue to perform these activities on their own.

F. Project Implementation

170. **Institutional Strengthening.** In some ways the institutional strengthening allowed for in the project funding has not been used in phase I. This probably had more to do with the way the Ministry perceived its mandate – in terms of providing a technical advisory service – than with a deliberate policy not to use loan funds for TA. Essentially, the Ministry was not convinced that the approaches being suggested, especially with respect to participation, were cost effective or appropriate to the development being sought. In addition, social development activities were seen to fall under the Ministry of Social development. This was a narrow view of project activities that considered them a means to increasing production and productivity only. During the course of implementation this view has changed. For the planners in the Ministry this reflects wider considerations of the need for poverty alleviation measures in the rural areas, and the need to define a role for the Ministry in helping to realise the Government’s more participatory and poverty focused development policies. At the project level, the staff now has a better understanding of the need to assess the socio-economic impacts of their actions. This is now timely to help the MOA with the sort of institutional strengthening which will let them grow into their new role. The key to this is for the Ministry to accept the need for assistance with the development of skills which it does not have.

171. In addition, the training given to staff and beneficiaries in phase I has been a vital element in the success of the project. For beneficiaries the training programme needs to be continued in phase II, whilst for staff some refresher training will be desirable, coupled with training in the new participatory approaches. The mission would therefore recommend that:

- An appropriate package of institutional strengthening be included in phase II, covering both the technical training requirements of beneficiaries and staff, and sufficient to allow for the adoption and introduction of the suggested participatory methods. In addition assurances should be sought that identified staff needs and planned training activities will be fully funded during implementation of phase II.
- Sensitisation in participatory approaches should be included as a package for all Ministry staff.
- The project’s training programme should be regularly monitored by the Training Department in the Ministry.

172. **Decentralisation.** The project activities are tending to substitute for the regular roles of the staff of the FDAs. Whilst this may have come about because the project has more funding and is able to promise more to potential beneficiaries, it is not sustainable. Essentially the strategy should be for the project activities to temporarily complement the activities of the FDAs. This may require additional support for the extension services as well as a formalised handover process by which developed areas become the responsibility of the FDAs. In addition, the ongoing involvement of the RACC needs to be strengthened, so that relevant decisions about the project’s day-to-day work programme can be taken by the agencies most closely involved. Both these aspects would serve to reinforce the decentralised nature of the project’s activities.

173. A further consideration relating to a more decentralised approach is the long term nature of the SWC activities. The MOA has indicated that it has ambitious plans to continue and expand the conservation activities demonstrated through ARMP in many other areas where conditions are
appropriate. The best way to realise these ambitions is not through a project (or series of projects) but through a national programme under which the SWC activities are simply another service available through the FDAs. As such, the purpose of the PMU might then be understood as demonstrating the new approaches and techniques and training the local staff, before moving on. This approach would also help to address the difficulties in targeting the poorest groups through SWC activities – the clear intention would be simply to demonstrate the potential of the intervention on small areas in terms of production increases (plus increases in land values), and not to develop larger land areas.

174. The mission would make the following recommendations:

- A formalized handover procedure should be devised so that land areas developed and other facilities constructed by the project are handed over to the FDAs or other government agencies (e.g. the MIWR in the case of the mini-dams and hafiras) for follow up and maintenance.
- The role of the RACC should be more clearly defined as an ongoing responsibility for the work programme of the project. This might, for example, involve the approval of all areas to be developed and quality control of the project’s construction activities.
- The Ministry should address the question of an exit strategy for project supported activities, possibly considering the transfer of more activities and skills to the FDAs.

175. **Project Implementation.** In addition to the above major aspects, the mission would make the following recommendations:

- The project should seek to make wider use of the assistance available in other Departments in the MOA, both to address strategic issues (e.g. the marketing of olive oil) and to obtain technical support (e.g. with arranging training). In addition, care should be taken to link with the Ministry’s own M&E Department, in order to harmonise reporting on the overall progress of projects.
- Consideration should be given to the adoption of the M&E system devised for ARMP in a wider context: there is the potential to extend the methods used to many projects in the Region. With appropriate support ARMP could provide a local “centre of excellence” for training in M&E.
APPENDICES

Appendix 1: Approach Paper
Appendix 2:  a) Methodological Framework for Project Evaluation
            b) Summary Evaluation Assessments
Appendix 3  Impact and Effectiveness Matrices
Appendix 4: The Use of Sanadiq for Channelling Credit Funds
Appendix 1

APPRAOCH PAPER AND TORS FOR THE MISSION

1. Rationale and Objectives of the Evaluation

During the period 7th – 24th January 2004 an IFAD Evaluation Team will visit Jordan to undertake an Interim Evaluation (IE) of the IFAD-supported Agricultural Resources Management Project (ARMP). The project is due to close at the end of December 2003, and based on the successful implementation experience the Government of Jordan (GOJ) has requested a second phase covering an expanded project area. The rationale for the IE is to assess project effectiveness and impact and derive insights and lessons from this experience to be taken into account in designing a second phase. More specifically, the objectives of the IE will be to:

i.) assess the relevance of project objectives to the rural poor, the extent to which these objectives were achieved and the efficiency of the intervention;
ii.) assess the intended and non intended impact of the project on rural poverty and the prospects for sustainability of these impacts;
iii.) assess the implementation experience, identify successful and innovative approaches used during implementation and the potential for their replication/scaling up, trace difficulties encountered and the means used to address them, and draw out lessons from this experience, especially those relevant to a second phase of the project, and
iv.) assess the performance of partners involved in project design and implementation and the means to enhance their collective performance in a second phase.

2. Evaluation Approach and Methodology

IFAD’s overall approach to interim evaluations consists of a joint examination with the borrower, project staff and beneficiaries of project progress and impacts. In this case the project was subject to a mid-term evaluation in 2001, which, apart from assessing the overall progress and impacts to that date, also provided a number of pointers and recommendations to be addressed in the second half of the implementation period. Some of these are enshrined in the Agreement at Completion Point. The approach adopted for the IE will therefore be to update the impacts recorded at that time and assess the changes that have occurred as a result of the ACP and the MTE recommendations. In undertaking the evaluation, the mission will use the new Methodological Framework for Project Evaluation (MFE) developed in 2001 by IFAD’s Office of Evaluation (OE). The document containing the methodology was shared with the PMU and the MOA Directorate of Projects during the preparatory mission undertaken by the IFAD’s Senior Evaluator in charge to Amman and the project area from 26 November to 2 December and the main elements of this framework were discussed during her visit.

The MFE will be rigorously adhered to by the IE. In this framework the three main evaluation criteria are:

- Performance of the Project
- Impact of the Project on Rural Poverty and
- Performance of the Partners

The judgments necessary to assess these criteria are built up from detailed examination of a large number of contributing elements. The Performance of the Project includes the assessment of the relevance of the project objectives to the rural poor, the extent to which these objectives have been achieved and the efficiency of the intervention;
achieved and the efficiency of the intervention. To evaluate Impact on Rural Poverty requires the assessment of seven categories as per relevance to intentions in project design.

- Impact on Physical and Financial Assets
- Impact on Human Assets
- Impact on Social Capital and People Empowerment
- Impact on Food Security
- Impact on the Environment and Communal Resource Base
- Impact on Institutions, Policies and the Regulatory Framework
- Over-arching factors
  - Sustainability
  - Innovation and Replicability/Scaling up
  - Impact on Gender Equity and Women Empowerment

Assessment of Performance of Partners requires an analysis of the performance of IFAD, the CI, the Government and its implementing agencies, NGOs/CBOs, and Co-financers, if relevant to the project.

The mission will carry out its work on the basis of the background documentation available (e.g. the Staff Appraisal Report, the President’s Report and Recommendations, Supervision Mission Reports, the Project Annual and Semi-annual Reports, other reports produced by follow-up missions commissioned by IFAD, and the report of the MTE), plus the Inception Report of ARMP Phase II. This will be supplemented by an extensive field programme. The mission will hold talks in Amman with MOA and Ministry of Planning (including NCARTT) and ACC, and other public and private organisations, as well as NGOs before moving to Karak (the site of the PCU) from where it will undertake a programme of visits to the four Field Directorates of Agriculture concerned with implementation (Qasr, Karak, Mazar and Tefila). The mission will examine the modus operandi of the project and meet with local project and government staff, community organisations involved in the project, beneficiary groups and individual beneficiaries.

The mission will initiate its field work with a start up meeting with all members of PMUs to elicit collective reactions from project staff on project implementation experience and agree on mission’s programmes, logistics and field approach. During its field work the mission will hold workshops with beneficiaries and field staff in selected locations to assess beneficiaries reaction to project activities and its impact with previous agreement and full participation of project staff.

The initial mission findings, compiled in partnership with all counterparts, will be discussed with PMU and other project partners in the field upon the termination of the fieldwork. The mission will also produce an aide memoire, which will include its initial findings and recommendations. This will be discussed at a wrap-up meeting held in Amman (MOA) at the end of the mission with participation of all stakeholders. A comprehensive draft report will be produced about six weeks later.

To help the mission in achieving its objectives as elaborated in section 1 of the TORs and implementing the methodological framework mentioned in section 2, the field work will address, to the extent possible, the following issues:

### 3. Issues to be Addressed by the Evaluation

#### A. Soil and Water Conservation and Farm Development

- Review the balance of SWC activities adopted by the project since the re-allocation of resources following the MTE to see if this balance should be adopted in future. Assess the specifications of SWC constructions from the point of view their economic sizes and practicability for farmers; this concerns, especially, the size of cisterns and their maintenance requirements.
• Review the cropping patterns promoted under the project to assess profitability under present market conditions and input/output costs. This particularly concerns the profitability of olive production and the potential for high value alternatives to olives. For alternative crops, if proposed, outline suggestions for a potential development programme to be considered in a second phase. This should also consider the relative water use efficiency of crops and irrigation systems.

• In conjunction with the above point, examine the rate of conversion of land to cropping and identify constraints which might be limiting farmers from making the land more productive following SWC activities.

• Assess the technological approaches adopted and the availability/adequacy of technical packages for smallholder development. This should include assessment of the capacity to deliver efficient demand driven extension services to project beneficiaries and link between research and extension.

B. Environmental Considerations

• Re-assess the emerging environmental impacts of the project (positive and negative), and the monitoring regime/mechanism which has been established. Attention should be paid to the indicators which are being measured. Under this heading both the upstream and downstream affects of the hafirs, including social aspects, should be given high priority.

C. Participatory Mechanisms and Targeting

• Identify the actual beneficiaries of project interventions to date, compared to the proposed target groups at design, explain deviations, if any, including analysis of targeting mechanisms and propose measures to enhance future outreach to the poor.

• Assess the viability of the participatory approach adopted by the project to date and the constraints encountered (paying particular attention to the adoption of the recommendations in the ACP of the MTE). Review the contribution of local groups to the sustainability of the project induced activities.

• Assess the implementation achievements of the women’s development programme and the impacts of the project on women, including their access to credit. Evaluate project staff capacity as developed to implement this programme and comment on any further training requirements, if any.

• Review the MOA’s and ACC’s newly emerging strategies to address rural poverty; comment on the implications for project design.

D. Rural Credit and Employment

• Examine the main features and implementation mechanisms concerned with credit in ARMP. This covers various aspects, such as:

  - The promotion of the credit programme by the project and the uptake.
  - Recovery rates, so far, by ACC branches in the project area, illustrating the structure of loans and recovery by purpose, lending terms and conditions, loan duration and the effectiveness of the revolving mechanism.
  - Evaluate the effectiveness of the credit delivery mechanisms in reaching IFAD target groups and supporting the intentions described in the project design, including the
establishment and use of a revolving credit fund by ACC, identifying constraints and comparing achievements to planned targets.

- Examine the profitability of existing income generating activities and possible alternatives.
- Review the implementation of the institutional strengthening which the project has provided for ACC. Assess the cooperation and coordination between project staff and ACC branch staff, the follow-up on credit financed activities and the contribution of ACC to the project coordination committees.

- In the light of the above, briefly assess the changes proposed by ACC to develop a credit window for the poor as the extent to which it is relevant and can be extended to IFAD activities.

E. Project Management/Coordination

- Review the coordination and management arrangements made for the PMU and assess the directional guidance given and changes made by the PSC. Particular attention should be paid to the separate but overlapping roles of the PMU and the FDAs. Assess the roles and contribution of other implementing partners, such as ACC, NCARTT, and CARE.

- From the above analysis determine the overall effectiveness of the project implementation arrangements.

- Assess the progress of the M&E system in defining and measuring impact indicators (particularly those referring to project impact on the environment), in collecting and analysing data for this purpose and the extent to which the M&E system has served as a management tool.

- As far as data allows estimate ex-post project ERR from an analysis of project data and estimations of the flow of benefits.

F. Institutional Strengthening and Training

- Assess the project performance with respect to the sustainable institutional strengthening (including technical assistance) provided for MOA. Identify gaps in the IS programme which need to be rectified in future.

- Assess effectiveness of the training programmes for project staff and beneficiaries in relation to their needs. Identify shortfalls, if any, in project performance and impacts as a result of untimely or under funded training programmes.

G. Efficiency of Project Implementation

The mission will attempt to assess the ex-post economic rate of return of the project or selected project activities as per availability of data. During her preparatory visit to the project area the Senior Evaluator in charge discussed this issue with the M&E staff of the project and agreement was made on the data required and their expected contribution in data preparation.
4. IFAD Mission Composition and Schedule

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<tr>
<th>Name</th>
<th>Date of Arrival</th>
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<tbody>
<tr>
<td>Mr F. Butcher: Mission Leader and Institutions Specialist</td>
<td>7th January, time of arrival to be advised</td>
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<tr>
<td>Dr M. Hashem: Sociologist and gender specialist</td>
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<tr>
<td>Mr S. Goodbody: NRM Specialist</td>
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<td>Mr O. Imady: Credit Specialist</td>
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<td>Mr S. Mananwatte: Economist and Financial Analyst</td>
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<tr>
<td>Dr Mona Bishay, IFAD Senior Evaluator and Mission Supervisor will join the mission during part of the field work and for the discussion of the Aide Memoire</td>
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The MOA/PMU/ACC will facilitate mission logistics, provide counterpart staff to work closely with the IFAD consultants and to facilitate fieldwork. The outline mission schedule, for planning purposes, is as follows:

- 26 November – 2 December 2003 Preparatory mission by Dr M. Bishay
- 22 December 2003 Sharing of Approach Paper and Terms of Reference of the evaluation
- 5-7th January 2004 Document review
- 7th January 2004 Mission assemblies in Amman
- 8th January 2004 Initial meetings MOA, Amman
- 9th - 19th January 2004 Fieldwork, Karak/Tefila
- 20th January 2004 Beneficiary meeting, Karak
- 24th January 2004 Wrap-up meeting, Amman
- 26th January - 25th February 2004 Report Writing
- End March 2004 Circulation of Draft Report
- April – May 2004 Agreement at Completion Point

5. Core Learning Partnership

Prof. Awni Taimeh, Secretary General, Ministry of Agriculture
Mr Radi A. Tarawneh, PhD, Director, Productive Projects Dept., Ministry of Planning
Mr Mahmoud Choulen, Director of Projects, Ministry of Planning
Mr Mousa Al Abbadi, Director, Dept. of Projects, Ministry of Agriculture
Mr Jihad Abu Mushrif, Director of International Cooperation
Mr Nimr El Nabulsi, Director General, Agricultural Credit Corporation (ACC)
Eng. Reem Qura’n, Assistant Director General, Public and International Affaire, Agricultural Credit Corporation (ACC),
MR Jamil Jaafreh, Project Director, Karak and Tafila
Representative from Care International, Jordan
Dr Mervat Badawi, Director, Technical Department, AFESD, Kuwait
Dr Abdelhamid Abdouli, Country Portfolio Manager, Near East and North Africa Region, IFAD
Dr Mona Bishay, Deputy Director, Office of Evaluation, IFAD

The Core Learning Partnership (CLP) will review the Approach Paper, the Aide Memoire and the draft evaluation report and will agree on the main conclusions, lessons and recommendations to be included in the Agreement at Completion Point.

6. Agreement at Completion Point

The CLP will agree on the conclusions, recommendations and lessons learned to be included in the Agreement at Completion Point through a mechanism to be defined in later discussions. The Agreement is expected to be finalised in April – May 2004.
Appendix 2a

METHODOLOGICAL FRAMEWORK FOR PROJECT EVALUATION

PERFORMANCE OF THE PROJECT

Relevance of Objectives
Effectiveness
Efficiency

IMPACT ON RURAL POVERTY

Impact on Physical and Financial Assets
Impact on Human Assets
Impact on Social Capital and People's Empowerment
Impact on Food Security
Impact on the Environment and Communal Resource Base
Impact on Institutions, Policies and the Regulatory Framework

Overarching Factors
- Sustainability
- Innovation and Replicability/Scaling up

PERFORMANCE OF THE PARTNERS

IFAD
Cooperating Institution
Government and its agencies
NGOs/CBOs
Cofinanciers

OVERALL PROJECT PERFORMANCE
### SUMMARY EVALUATION ASSESSMENTS

<table>
<thead>
<tr>
<th>Evaluation Criteria/sub-criteria</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project performance</strong></td>
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<tr>
<td>Relevance</td>
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<td>Effectiveness</td>
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<td>Efficiency</td>
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<td><strong>Impact on Poverty</strong></td>
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<tr>
<td>Impact on Physical and Financial Assets</td>
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<tr>
<td>Impact on Human Assets</td>
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<td>Impact on Food Security</td>
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<td>Impact on the Environment and Communal Resource Base</td>
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<td>Impacts on Gender</td>
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<tr>
<td>Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>Innovation and Scaling up</td>
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<tr>
<td>Other Poverty Impact</td>
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<td><strong>Performance of the Partners</strong></td>
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<td>NGOs/CBOs</td>
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Source: Mission estimates
### IMPACT AND EFFECTIVENESS MATRICES

**I. Physical and financial assets**

<table>
<thead>
<tr>
<th>Key Questions for Impact Assessment in Rural Communities Affected by the project (changes to which the project has contributed)</th>
<th>Assessment of Change (1)</th>
<th>Reach of Change (3)</th>
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<th>Sus. Pot. *** (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Presence and Direction of Change (+)(0) (-)</td>
<td>What has changed (Indicators)</td>
<td>Extent of Change: How much (Rating) <strong>(4/3/2/1)</strong></td>
<td>How Many (households and people)</td>
</tr>
<tr>
<td>1.1 Did farm households physical assets change (i.e. farmland, water, livestock, trees, equipment, etc.)?</td>
<td>+ Olives, land values, water, fences 62k du 4</td>
<td>3821 hh P-BO M 4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1.2 Did other household assets change (houses, bicycles, radios, etc.)?</td>
<td>+ Misc. - 2</td>
<td>3821 BO M/F 4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>1.3 Did infrastructure and people access to markets change (transport, roads, storage, communication facilities, etc.)?</td>
<td>+ Access roads. 400 km 3</td>
<td>1350 P-BO M/F 1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1.4 Did households financial assets change (savings etc)?</td>
<td>+ income 5-125 3</td>
<td>1800 hh P-BO M/F 4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1.5 Did rural people access to financial services change (credit, saving, insurances, etc.)?</td>
<td>+ Credit access $2.6 mn 4</td>
<td>1151 hh P-BO M/F 4</td>
<td></td>
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</table>

**II. Human assets**

<table>
<thead>
<tr>
<th>Key Questions for Impact Assessment in Rural Communities Affected by the project (changes to which the project has contributed)</th>
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<td></td>
<td>Presence and Direction of Change (+)(0) (-)</td>
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<td>Extent of Change: How much (Rating) <strong>(4/3/2/1)</strong></td>
<td>How Many (households and people)</td>
</tr>
<tr>
<td>2.1 Did people access to potable water change?</td>
<td>+ Cisterns, inc - 2</td>
<td>3821 P-BO M/F 4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2.2 Did women and children workload change?</td>
<td>+ Extra activities - 2</td>
<td>All All M/F 4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2.3 Did adult literacy rate and/ or access to information change?</td>
<td>+ skills - 2</td>
<td>? All M/F 4</td>
<td>1</td>
<td>2</td>
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**III. Social capital and people empower-ment**

<table>
<thead>
<tr>
<th>Key Questions for Impact Assessment in Rural Communities Affected by the project (changes to which the project has contributed)</th>
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<td>What has changed (Indicators)</td>
<td>Extent of Change: How much (Rating) <strong>(4/3/2/1)</strong></td>
<td>How Many (households and people)</td>
</tr>
<tr>
<td>3.1 Did rural people organizations and institutions change?</td>
<td>+ WUAs 62 1</td>
<td>? All M 2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3.2 Did social cohesion and local self-help capacity of rural communities change?</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3.3 Did gender equity and/or women’s conditions change?</td>
<td>+ IGAs 1038 2</td>
<td>1038 P-BO F 3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3.4 Did rural people feel empowered vis a vis a local and national public authorities and development partners? (Do they play more effective role in decision making?)</td>
<td>0 -</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3.5 Did rural producers feel empowered vis a vis the market place?</td>
<td>M 0 - - - - - - - -</td>
<td>F + credit $1.9mn 3</td>
<td>1038 P-BO F 3</td>
<td>3</td>
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**IV. Food Sec Production, Consumption**

<table>
<thead>
<tr>
<th>Key Questions for Impact Assessment in Rural Communities Affected by the project (changes to which the project has contributed)</th>
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<td>Presence and Direction of Change (+)(0) (-)</td>
<td>What has changed (Indicators)</td>
<td>Extent of Change: How much (Rating) <strong>(4/3/2/1)</strong></td>
<td>How Many (households and people)</td>
</tr>
<tr>
<td>4.1 Did farming technology and practices change?</td>
<td>+ Technology 50k du 2</td>
<td>3821 P-BO M/F 4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>4.2 Did agricultural production change (area, yield, production mix, etc.)?</td>
<td>+ Olives, cereals 50k du 2</td>
<td>3821 P-BO M/F 4</td>
<td>4</td>
<td>4</td>
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**V. Envt & common resources**

<table>
<thead>
<tr>
<th>Key Questions for Impact Assessment in Rural Communities Affected by the project (changes to which the project has contributed)</th>
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<th>Reach of Change (3)</th>
<th>Dynamic Processes ** (4)</th>
<th>Sus. Pot. *** (5)</th>
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<tr>
<td></td>
<td>Presence and Direction of Change (+)(0) (-)</td>
<td>What has changed (Indicators)</td>
<td>Extent of Change: How much (Rating) <strong>(4/3/2/1)</strong></td>
<td>How Many (households and people)</td>
</tr>
<tr>
<td>5.1 Did the natural resource base status change (land, water, forest, pasture, fish stocks…)?</td>
<td>+ Stabilized soil. 200k m³ 2</td>
<td>3550+ P-BO M/F 4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.2 Did exposure to environmental risks change?</td>
<td>+ Stabilised slopes Aquifer -</td>
<td>-</td>
<td>4</td>
<td>1</td>
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</table>

**VI. Institutions, policies, and regulatory framework**

<table>
<thead>
<tr>
<th>Key Questions for Impact Assessment in Rural Communities Affected by the project (changes to which the project has contributed)</th>
<th>Assessment of Change (1)</th>
<th>Reach of Change (3)</th>
<th>Dynamic Processes ** (4)</th>
<th>Sus. Pot. *** (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Presence and Direction of Change (+)(0) (-)</td>
<td>What has changed (Indicators)</td>
<td>Extent of Change: How much (Rating) <strong>(4/3/2/1)</strong></td>
<td>How Many (households and people)</td>
</tr>
<tr>
<td>6.1 Did rural financial institutions change?</td>
<td>+ Conditions - 2</td>
<td>1151 P-BO M/F 4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6.2 Did local public institutions and service provision change?</td>
<td>0 - - - - - -</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6.3 Did national/sectoral policies affecting the rural poor change?</td>
<td>+ strategy - 3</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>6.4 Did the regulatory framework affecting the rural poor change?</td>
<td>0 - - - - - -</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Notes: Rating: 4= High; 3= Substantial; 2= Modest; 1= Negligible. Also used to indicate values in the “how much?” column. Values estimated to end June as most figures available to this point.
# Appendix 3

## IMPACT AND EFFECTIVENESS MATRICES

<table>
<thead>
<tr>
<th>MAIN DOMAINS OF IMPACT</th>
<th>Key Questions for Impact Assessment in Rural Communities (changes to which the project has contributed)</th>
<th>Expectation of Impact (Project Stated Objectives)</th>
<th>Effectiveness Rating (Achievement Against Stated Objectives)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Physical and financial assets</strong></td>
<td>1.1 Did farm households physical assets change (i.e. farmland, water, livestock, trees, equipment, etc.)?</td>
<td>P-BO SWC, Yields 7500 ha 2500 hh</td>
<td>3 3 3 3</td>
</tr>
<tr>
<td></td>
<td>1.2 Did other household assets change (houses, bicycles, radios other durables, etc.)?</td>
<td>BO Misc. Significant 2500 hh</td>
<td>3 4 4 4</td>
</tr>
<tr>
<td></td>
<td>1.3 Did infrastructure and people access to markets change (transport, roads, storage, communication facilities, etc.)?</td>
<td>P-BO</td>
<td>3 2 3 2</td>
</tr>
<tr>
<td></td>
<td>1.4 Did households’ financial assets change (savings etc.)?</td>
<td>P-BO Savings 30-400% 400 hh</td>
<td>4 4 4 4</td>
</tr>
<tr>
<td></td>
<td>1.5 Did rural people access to financial services change (credit, saving, insurances, etc.)?</td>
<td>P-BO Credit significant 1800 hh</td>
<td>4 2 3 4</td>
</tr>
<tr>
<td><strong>II. Human assets</strong></td>
<td>2.1 Did people access to potable water change?</td>
<td>P-BO Cisterns, springs 105 springs 2240 cis 2240 hh</td>
<td>4 2 4 4</td>
</tr>
<tr>
<td></td>
<td>2.2 Did women and children workload change?</td>
<td>BO Women w/load significant 400</td>
<td>4 4 4 4</td>
</tr>
<tr>
<td></td>
<td>2.3 Did adult literacy rate and/or access to information and knowledge change?</td>
<td>P-BO Women, extr significant 2500 hh</td>
<td>3 3 2 4</td>
</tr>
<tr>
<td><strong>III. Social capital and people empowerment</strong></td>
<td>3.1 Did rural people organizations and institutions change?</td>
<td>P-BO Comm. Dev. significant 2500 hh</td>
<td>1 0 0 1</td>
</tr>
<tr>
<td></td>
<td>3.2 Did social cohesion and local self-help capacity of rural communities change?</td>
<td>P-BO Comm dev small</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td></td>
<td>3.3 Did gender equity and/or women’s conditions change?</td>
<td>BO IGAs 400 400</td>
<td>4 3 3 4</td>
</tr>
<tr>
<td></td>
<td>3.4 Did rural people feel empowered vis a vis local and national public authorities and development partners? (Do they play more effective role in decision making?)</td>
<td>P-BO Ben. part. significant 3300</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td></td>
<td>3.5 Did rural producers feel empowered vis a vis the marketplace? Are they in better control of inputs supply and marketing of their products?</td>
<td>P Female Income Significant 400 hh</td>
<td>4 4 4 4</td>
</tr>
<tr>
<td><strong>IV. Food Security (Production, Income and Consumption)</strong></td>
<td>4.3 Did farming technology and practices change?</td>
<td>P-BO Tech Significant 2500 hh</td>
<td>4 3 3 4</td>
</tr>
<tr>
<td></td>
<td>4.5 Did agricultural production change (area, yield, production mix, etc.)?</td>
<td>P-BO Prodn Significant 2500 hh</td>
<td>4 4 4 4</td>
</tr>
<tr>
<td><strong>V. Environment and common resources</strong></td>
<td>5.1 Did the natural resource base status change (land, water, forest, pasture, fish stocks…)?</td>
<td>P-BO Water levels Significant 3500+</td>
<td>4 4 4 4</td>
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<tr>
<td></td>
<td>5.2 Did exposure to environmental risks change?</td>
<td>P-BO Erosion 7500 ha 2500</td>
<td>4 3 3 4</td>
</tr>
<tr>
<td><strong>VI. Institutions, policies, and regulatory framework</strong></td>
<td>6.1 Did rural financial institutions change?</td>
<td>ACC Cr. conds 1000 hh</td>
<td>2 1 1 4</td>
</tr>
<tr>
<td></td>
<td>6.2 Did local public institutions and service provision change?</td>
<td>P-BO Extns small 2500+hh</td>
<td>3 3 3 2</td>
</tr>
<tr>
<td></td>
<td>6.3 Did national/sectoral policies affecting the rural poor change?</td>
<td>- - - -</td>
<td>0 2 2 0</td>
</tr>
<tr>
<td></td>
<td>6.4 Did the regulatory framework affecting the rural poor change?</td>
<td>- - - -</td>
<td>0 0 0 0</td>
</tr>
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Appendix 4

THE USE OF SANADIQ FOR CHANNELING CREDIT FUNDS

This alternative mechanism suggested for group based lending is based on the premise of creating sanadiq, or funds, that are open to male and female members of the target group who can not fulfil existing ACC conditions regarding collateral. The Arabic term sanadiq refers to a culturally known indigenous institution in the Arab world, Jordan included, which acts as an informal mechanism of savings and credit. In legal terms, a sanduq is a special type of jam'iyah, or association, that has the right to collect deposits as well as provide loans. As opposed to Government sponsored institutions, e.g. cooperatives, a sanduq has the distinct attribute of being a completely autonomous institution that represents the concerns of its members and, equally important, that is based primarily on their own financial deposits. Cooperatives in Jordan, as is the case in many other Arab countries, are not regarded as institutions that are genuinely reflective of the needs of the poor and, thus, the sanadiq represent an alternative institutional set up that could be utilized for the purposes of channelling credit to the rural poor.

The primary features of sanadiq may be summarized as follows:

- **Self-reliance** - based on the mobilization and ownership of local resources:
- **Cultural self-reliance** - based on the concept of the sanduq as an ancient community-based financial institution in the Arab World.
- **Organizational self-reliance** - based on sanduq self-governance by local men and women through elected committees
- **Financial self-reliance** - based on the self-financing of the sanadiq through share capital paid-up by the members and retained earnings, derived from adequate, non-subsidized financial margins and insistence on full repayment of loans
- **Autonomy** - based on self-selection of member-owners, in the choice of financial products, in the determination of margins and in lending decisions.
- **Sustainability** - based on the establishment of operationally and financially self-sufficient local financial institutions, together with a regional association and a regional fund.
- **Increasing outreach to the poor** - through growth in the number of members, expansion in the number of sanadiq, growth of resources, and dissemination of the approach among other agencies and areas throughout Jordan.

These sanadiq would be created by the project’s credit unit, trained by subcontracted parties and would operate under the full joint supervision of the project’s credit unit and ACC. Regional experiences of such sanadiq confirm that a high recovery rate can be combined with outreach to the poorest members of the rural poor, provided that they are adequately organized, trained and supervised.\(^30\)

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\(^30\) The experience of sanadiq in Syria, both in the framework of UNDP and IFAD projects, provides an important example in this regard.