



## 1. Project Data

Project ID  
P117081

Project Name  
MA-GEF Integrating CC in the PMV

Country  
Morocco

Practice Area(Lead)  
Agriculture

L/C/TF Number(s)  
TF-99539

Closing Date (Original)  
15-Oct-2015

Total Project Cost (USD)  
31,295,454.00

Bank Approval Date  
17-May-2011

Closing Date (Actual)  
15-Oct-2015

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	4,345,454.00	4,345,454.00
Revised Commitment	4,257,965.65	4,257,965.65
Actual	4,257,965.65	4,257,965.65

Sector(s)

Agricultural Extension, Research, and Other Support Activities(40%):Public Administration - Agriculture, Fishing & Forestry(30%):Crops(15%):Irrigation and Drainage(15%)

Theme(s)

Climate change(100%)

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## 2. Project Objectives and Components

### a. Objectives

Project Portal Project Development Objective

To strengthen the capacity of public and private institutions and of farmers to integrate climate change adaptations in projects directed to small farmers in five target regions.

Financial Agreement Development Objective

To strengthen the capacity of public and private institutions and of farmers to integrate climate change adaptations in projects directed to small farmers in the Project Area.

Source: GEF Grant Agreement, June 8, 2011



The Objectives stated in the PAD are substantively the same: the only change being that, instead of “in the project area,” the PAD objective uses the phrase – “in five target regions.”)

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Components

*1. Development of the capacities of public and private institutions to integrate climate change adaptations in projects directed to small farmers in five target regions.*

(Estimated costs at appraisal: \$0.5 million; actual costs: \$0.65 million.)

Development of the capacities of selected staff involved with climate change adaptation to plan and implement climate change adaptations in projects for small farmers. This would be in order to influence sub-project mechanisms for adaptation to climate change measures.

There were two main actions under this component: (i) provision of training, workshops, field visits and dissemination materials; and (ii) awareness campaigns.

*2. Dissemination of climate change adaptations among small farmers in five target regions*

(Estimated costs at appraisal: \$3.85 million; actual costs: \$3.61 million.)

Dissemination amongst small farmers in the five target regions of climate change adaptation measures through: (i) awareness building, and provision of goods, small scale works, and services; (ii) training, workshops and field visits; and (iii) M&E.

The project costs above are for the activities under the scope of the \$4.35 million Grant. In addition, the Moroccan Government provided parallel financing estimated at appraisal to be \$26.95 million, for financing additional sub-projects (refer section 2d).

The primary beneficiaries would be small farmers.

The implementing agencies were the Agency for Agricultural Development for component one and for overall project coordination and reporting; and the Ministry of Agriculture and Maritime Fishery for component two; with, for field implementation, the Regional Agricultural Directorates and the Provincial Agriculture Departments.

d. Comments on Project Cost, Financing, Borrower Contribution, and Dates

**Project costs:** The Project (Integrating Climate Change in the Implementation of the Plan Maroc Vert Project; PICCPMV) had an estimated project costs estimated at appraisal of \$4.35 million to be financed under a GEF Grant of the same amount. In parallel, \$26.95 million was estimated to be financed by Government to fund additional sub-projects, making for a total funding of \$31.30 million. Actual costs were \$4.26 million disbursed under the Grant, \$22.37 parallel financing by Government, and a total project cost of 26.63 million.

(While the difference between Grant and Government financing is made clear in the PAD and ICR, it is questionable whether the two should be put together as “project costs” when GEF has little control of the quality and implementation of Government activities.

Government financing of the Green Morocco Plan could have been mentioned but kept separate from the Grant activities.)

**Project Financing:** The project was financed by a Grant of \$4.35 million from the GEF’s Special Climate Change Fund of which \$4.26 million was disbursed. Refer above for commentary on project costs.

**Borrower Contribution:** Separate financing was provided by Government for other sub-projects under the Green Morocco Plan. Amounts were \$26.95 million, estimated at appraisal, and \$22.37 million actual.

**Dates:** The project was Approved on 05/17/2011, and closed on 10/15/2015, the planned closing date, making for a 5 ½ year project period. Project Effectiveness was on 10/21/2011, five months after Grant Approval. The Mid Term Review was in October 2013, about the same as the planned date at appraisal.

**Restructuring:** There was a Level 2 Restructuring on 10/30/2014 to: reduce part of the funds originally allocated for component 2 (from \$3.79 as originally allocated to a revised allocation of \$3.05 million); and to increase funding for Component 1 (from the original \$0.42 million to \$1.3 million). There were no changes in the project objectives, and no significant changes in the implementation of the project components.

### 3. Relevance of Objectives & Design



a. Relevance of Objectives

The project's objectives are responsive both to the challenges that agricultural producers face regarding the impact or expected impact of climate change, and to Bank and Government strategies for adapting agricultural development to the greater stresses that Morocco's changing climate will generate.

Morocco has experienced generally good economic growth over the last two decades (GDP growth at about 4 percent per annum in the 2000-2015 period), but smallholder farmers, with typically rain-fed farms, have been left behind. People in rural areas, comprising 43 percent of Morocco's population, account for two-thirds of those living below the poverty line. Depending on rainfall and other climatic variables, poor smallholder farmers are particularly vulnerable to weather-induced stress.

Since 1960, average temperature in Morocco has increased by 0.16 degrees centigrade per annum, and is projected to increase by three degrees Celsius by 2080. Annual rainfall has declined (no figure is provided in the ICR), and average precipitation is expected to decrease by 20 percent by 2050. "Spring rains" are reported to have fallen by 40 percent, compared with past rains, and dry periods in the cropping season have lengthened by an average of 15 days. The Bank's 2010 World Development Report ranked Morocco as one of the countries for which climate change will have the greatest impact on agricultural yields. Thus, while it is clearly difficult to project future precipitation and temperatures, for Morocco, taking steps now to adapt agriculture, especially smallholder agriculture, to climate change is an evident priority. Bank and Government strategy documents have consistently recognized the importance of adapting agriculture, especially smallholder rain-fed agriculture, to climate change. The 2014-17 Country Partnership Framework, which built on the 2010-13 country strategy, has as one of its three "pillars," building a green and resilient future. The project's objectives are directly relevant to this thrust. The project's strong emphasis on institution and capacity building is relevant to the third pillar – strengthening governance and institutions for improved services. The project's objectives are also relevant to Government's "Plan Maroc Vert," its guiding document for agricultural sector development from 2009 to 2020. Mainstreaming improved resilience to climate change, focused primarily on smallholder farmers, is one of the document's primary objectives. The plan emphasizes building a climate change perspective into agricultural development, and training of agricultural services staff in climate change adaptation. The Relevance of the project's Objectives was High.

Rating

High

b. Relevance of Design

The project's two components - a substantial awareness and training program for government officials, involved private parties, and farmers, and the piloting of climate change adaptations on smallholder farms - was generally well targeted to achieving the project objectives. A number of practical features enhanced prospects for later scale-up. Most notably, it was decided to use the existing government institutions for implementing the project - capacity was weak but these would be the institutions that would need to mainstream successful technologies beyond the project period. Integrating project activities into the activities of Morocco's general agricultural program and agricultural development projects would build capacity for climate change adaptation. Also, implementation of climate change adaptations under decentralized regional management fitted in with government decentralization objectives. The project integrated well with other Government and Bank projects, including the Development Policy Loans. The decision to focus at this stage on a limited number of technologies provided better chance of success than a more comprehensive approach and was consistent with the limited resources for the project. Design did not include adequate agro-meteorological services - a key part of climate-smart agriculture - as the country's general capacity in this field was less than projected.

A significant shortcoming is the limited linkage in the PAD (and ICR) between cause and effect. The Results Framework and Monitoring annex in the PAD (Annex 1) is only a listing of highly aggregated physical targets (such as "percentage of projects integrating at least one climate change adaptation"). There is only limited discussion of effect, farming systems, impact and outcome.

Rating

Modest

## 4. Achievement of Objectives (Efficacy)



## Objective 1

### Objective

To strengthen the capacity of public and private institutions and of farmers in the Project Area.

### Rationale

Efficacy can be considered from the perspective of two linearly linked sub-objectives:

- 1 . “Strengthening capacity of public and private institutions and of farmers” for
- 2 . “Integrating climate change adaptation” by farmers.

Each is assessed below:

#### *Objective 1: Capacity building.*

Achievements in training and awareness building exceeded targets:

- In public agencies linked with climate change adaptation, 264 staff were trained, against a target of 120 staff.
- In private institutions involved with climate change, 197 staff were trained against a target of 100 staff; and
- 3215 farmers were trained compared with the targeted 3200 farmers.
- Training and awareness building was diverse in technical subject matter and in the type of training, which used training by extension workers, international study tours (China, Netherlands), Morocco-based study tours, workshops, audio, and written bulletins and guides.
- There is no assessment in the ICR of the quality of training. In view of this gap, this ICR Review will take as proxies: (i) Government's interest in expanding the training program; (ii) the physical achievements in the field (Objective 2) which between them would be consistent with a training program which was effective, and which may have contributed to the targets being reached under Objective 2; (iii) the actual training achievement. The 3215 trainings referred to above achieved the target number, suggesting that training was of interest to farmers and appreciated.

While assessment of quality is limited, the project's efficacy in “strengthening capacity of public and private institutions and of farmers” (for climate change adaptation) is consistently supported by the achievements, and Efficacy is assessed Substantial.

### Rating

Substantial

## Objective 2

### Objective

To integrate climate change adaptations in projects directed to small farmers in the Project Area.

### Rationale

Disaggregated data on adoption by type of adaptation technology is available for some sub-projects but is not aggregated project-wide, and impact data is scarce. Annex 2 of the ICR provides some qualitative information and photographs of some of the climate change adaptation measures. The Annex illustrates a broad spectrum of activities, but little data on impacts by crop, and virtually no analysis of farming systems changes, for example changes in crop enterprises impacting changes in livestock enterprises) (section 10).

Nevertheless Some proxy indicators are indicative. The most direct indicator is the rate of uptake by farmers of the new technologies. Thus, the proportion of farmers adopting at least one climate change adaptation technology reached 43 percent, against a target of 35 percent, suggesting farmer interest in the climate change adaptation measures. The strong interest of Morocco in climate change adaptation can also be gauged by the country's participation in global climate change adaptation policies - In November 2016, Morocco hosted the annual UN Framework Convention on Climate change. Such interest suggests positive views about the impact of the adaptation technologies. Government interest in mainstreaming the climate change adaptation measures piloted by the project also infers that the technologies are having impact. Of greatest significance, according to MENARID, Fact Sheet, March 2013, farmers neighboring the project farmers were showing interest with the project and were experimenting with their own seed drills. This is of paramount importance for the future of the technology under varying local conditions and where cost is critical.

Some additional information on costs and benefits (not in the ICR) was provided to IEG by the Task Team. Notably:



- All nursery-raised olive trees grown with climate change adaptation measures survived, while, for trees that did not receive adaptation measures, 15 percent of the trees did not survive.
- Farmers who adopted direct seeding (as opposed to tillage) reduced costs by 15 percent from the average costs of control (non participating) farmers.
- In high precipitating years, farmers adopting climate change actions obtained yields 46 percent higher than non-participating farmers. (on a sample of 65 farmers). In drought years climate change farmers, had some yield whereas traditional farmers had no harvest.

Between Government's interest in mainstreaming the program, suggesting positive results, and the (limited) data and other indications above, the project's Efficacy integrating climate change adaptation by farmers, is likely to have been positive, but there is not enough information at this time to conclude a significant ("Substantial") impact. Efficacy for this sub-objective is, thus, rated Modest

Rating  
Modest

## 5. Efficiency

An ERR was not estimated at appraisal or in the ICR, as it was considered that assessment of benefits from field activities would require a time-frame longer than the project period (in fact, by using cross-sectional measurements through controls, even several years of such comparative data would have provided an informative data base), and that the benefits from the training program are hard to measure.. However, cost-effectiveness and consideration of the broader benefits of the project provide some indications of efficiency. (also refer to data in section 4)

*Cost Effectiveness.*

- Averaged across all sub-project types, costs of a climate change adaptation reached \$205 per ha and \$488 per farmer. These costs are lower than appraisal estimates of \$310/ha and \$344 per farmer. (The ICR comments that comparison with projects in other countries was not possible as adaptation measures vary and costs of an established program are lower than a pilot operation.)
- While sampling was small (50 farms), a survey by the National Institute for Agronomic Research found that for direct seeding of wheat, costs per hectare were 12 percent lower than costs for conventional (tillage), and yields increased by 16 percent. (Also refer to data in section 4) These combined yield increases and cost reductions can be expected to make a significant impact on farm profitability and thus future adoption.

*Broader benefits.*

The largest benefit of the project is likely to be its role piloting a climate change adaptation program in Morocco that can be scaled-up and integrated within the existing institutional structure and agricultural development program. (The project was entirely organic institutionally, not even having a project implementation unit). The indications are that the field interventions had some success, and the training program has established a basic capacity to move forwards. The project thus forms a base for implementing Government's intention to mainstream the project's approach within a larger agricultural development program. For less than \$5 million, the Grant is likely to have considerable benefits for Morocco's future agricultural and climate change adaptation strategy. On balance, the project's Efficiency was Substantial.

Efficiency Rating  
Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable



ICR Estimate	0	0 <input type="checkbox"/> Not Applicable
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\* Refers to percent of total project cost for which ERR/FRR was calculated.

## 6. Outcome

The project's objectives responded to climatic trends and the assessed need to adapt agriculture to a future with projected further weather extremes, reduced rainfall, and increases in temperature. The objectives - centered on enhancing institutional capacity, and piloting climate change technologies with farmers - were substantially relevant. Design was good in most respects, but was weak in connecting outputs to outcomes including impacts on farming systems, and in building an M&E program that could measure project impacts. This reduces the relevance of the project's design to modest. Efficacy was substantial for Objective 2, the institution building objective. But for Objective 2, the field piloting program, the limited impact data leaves uncertainties so impact is rated modest. Although efficiency also has data availability issues, the project has had broader benefits in that it has laid the path for mainstreaming of climate change adaptation. Efficiency is thus rated, on balance, substantial.

In summary, the project did well in most respects, but, given the shortcomings in design, and limited information on the impact of the climate change adaptation sub-projects, the Outcome of the project is rated Moderately Satisfactory.

- a. Outcome Rating  
Moderately Satisfactory

## 7. Rationale for Risk to Development Outcome Rating

The project has strong political and institutional ownership, and Government intends to scale-up the program. The project was implemented within the national rural development institutional structure, and is, thus, not project dependent, also enabling scaling-up on a firmer institutional base. Technologies are generally well known internationally, hence the project has some basis in experience elsewhere. Adding or removing technology packages would not be difficult as the same institutional structure and implementation processes could still be used. The Bank is supporting Morocco's climate change adaptation program through the series of Green Growth DPLs.

The observations above indicate the positive institutional and motivational base for driving the Integrating Climate Change program (the project initiative) forwards, but there are still questions related to technical and affordability concerns. Observations in Annex 2 of the ICR, indicate that a number of climate change adaptation technologies have met some disinterest of farmers. For instance, reluctance of farmers to take up all of the almond recommendations (Annex 2, para 101; and disinterest of farmers in switching from cereals to olives (para 107). There are also cases where the technologies have resulted in significant improvements in yield; for instance, the ICR reports that direct seeding increased cereal yields in a normal precipitation year by nearly 50 percent (para 123). But the general picture is one where many technologies, are still (as to be expected) in a trial mode, with impacts and the specific technologies to be used still uncertain. Another matter is affordability. Direct seeding equipment is relatively expensive. Also, waiting four or six years for a tree crop to start bearing is a significant loss of income for a marginal farmer. While details are not clear, the ICR indicates subsidization of a variety of activities. If subsidies were phased out, incentives to adopt climate change adaptation might be significantly affected.

It is concluded that, not surprisingly for a pilot project of this nature, until technologies, farmer adoption rates without subsidies, and impacts within the farm system become better understood and are accepted by farmers, Risk to Development Outcome is Substantial.

- a. Risk to Development Outcome Rating  
Substantial

## 8. Assessment of Bank Performance



**a. Quality-at-Entry**

The Bank, with Government, identified a strategic need for Morocco, and, preceded by policy dialogue, designed a project to pilot a climate change adaptation program. This was done within the Government's institutional structure, to test and facilitate possible mainstreaming of the program.

The key weakness was the limited scope of the M&E program, which was confined to following physical progress of the project. Indicators or proxy indicators for assessing the quality and impacts of the project were not provided (refer sections 4 and 10). (To be fully responsive in measuring quality and impact, a further step - monitoring on a farm system basis - would have offered better evidence.

Other shortcomings included: (i) an assessment of existing meteorological services, and identification of possible further needs was not done; and (ii) an institutional evaluation of water resources and groundwater management agencies, and of how to improve coordination between water and agricultural ministries would likely have eased project implementation.

Notwithstanding these shortfalls, a project that largely served its purpose piloting climate change adaptation was designed. The Bank also designed the project to fit in with other Bank projects, notably the Inclusive Green Growth DPL, and to integrate institutionally with Government's "Plan Maroc Vert," and the institutional structures of the agricultural development agencies, facilitating the scale-up program. Quality at Entry was Moderately Satisfactory.

Quality-at-Entry Rating  
Moderately Satisfactory

**b. Quality of supervision**

Supervision missions were regular - at about six month intervals. A single Task Manager was involved at project preparation and handled most of the project implementation period, providing a continuity in project knowledge and in relations with Government and project implementers. There was a close coordination between the teams for the project and the Green Growth DPL - the project team providing implementation support to the DPL or supervising both projects. Advice was provided in a number of implementation areas not familiar to the implementing agency - particularly in technical knowledge of climate change adaptation, procurement, disbursements and financial management. Such support enabled the project to reach most physical targets and be fully disbursed within the originally planned project closing date. Although the team might have tried retrofitting M&E to a more results based program, in other respects, supervision was strong. The quality of Supervision was Moderately Satisfactory.

Taking account of both the Quality at Entry and Supervision, the Overall Bank Performance was Moderately Satisfactory.

Quality of Supervision Rating  
Moderately Satisfactory

Overall Bank Performance Rating  
Moderately Satisfactory

## **9. Assessment of Borrower Performance**

**a. Government Performance**

Government commitment was consistently strong. The provision of \$22.37 million financing to other sub-projects, additional to the Grant funded sub-projects, indicates Government's ownership of the overall objectives of the climate change integration program. Collaboration between the Ministries handling agriculture and water was weak, but, as in other respects Government performed well, Government Performance is rated Satisfactory.

Government Performance Rating  
Satisfactory

**b. Implementing Agency Performance**

**Implementing Agency**

The Agency for Agricultural Development and the Regional Agricultural Directorates were strongly committed to the project. They provided





regular progress reports, and continued project implementation when disbursements were held up by bottlenecks. The project was implemented as scheduled without extension of the Grant period, and the implementing agencies are committed to scaling up the program. However, the agencies should, as with the Bank supervision team, have noted the limited impact-oriented M&E. In other respects, the agencies implemented the project well and to its physical targets. The Performance of the Project Implementers was Satisfactory. With both the performance of Government and the Implementers rated satisfactory, the Overall Performance of the Borrower was also Satisfactory.

Implementing Agency Performance Rating  
Satisfactory

Overall Borrower Performance Rating  
Satisfactory

## 10. M&E Design, Implementation, & Utilization

### a. M&E Design

The data to be collected was based on the requirements to measure attainment of the project's Monitorable Indicators. However, the MIs were almost exclusively on physical achievements. The two outcome indicators were the percentage of farmers, or of sub-projects integrating at least one climate change adaptation measure in the farming systems. Intermediate indicators included: staff and farmers trained; and farmers "benefitting" from training and awareness activities. There was, thus, no measures for the ultimate goals of climate change adaptations, such as impact on yields, costs, resilience to extreme climate conditions, survival rates of seedlings, farmer technical knowledge of climate change technologies, and soil organic content and moisture levels. It would be unrealistic to plan for comprehensive measurement of all such indicators, but a structure of a few key indicators or proxy indicators would likely have been possible (e.g. through rapid rural appraisal techniques, structured interviews with farmers and staff, etc.) Also, the ICR appropriately comments that the results of climate change adaptation are typically long-term, requiring observation over time because of weather variation and, in the case of trees such as olives, needing years before maturity.

Nevertheless, while these difficulties complicate impact assessment, use of proxy data and surveys would likely have given some sense of the project's impact, even in the short term. Thus, comparison of farmers taking up a technology could be compared with control farmers - or through questioning beneficiaries on their views and plans to use the technologies in the future. At least some measures - such as yield impact of direct seeding, early planting, crop variety, tree survival rates, costs of production, soil moisture and organic matter content, improved varieties, and changed planting dates - could have been chosen. A focused small survey including controls, or even rapid rural appraisal techniques, would have shed light on impacts. Likewise, the number of farmers or staff trained would have had more meaning if the quality of training had been also assessed: for instance: did farmers appreciate the technology? Have they introduced it on their farms? What do staff say about the utility of their training? Do staff think they can do their job better?

Hence, while exhaustive data collection, should not reasonably be expected for a small pilot project promoting climate change adaptations, a number of which are long-term in their full impact, design of the M&E program fell well short of being able to assess results and impacts of the adaptation technologies. The difficulties getting data for section 4 of this ICRR are illustrative.

Ideally, assessment of impacts would have included analysis for whole farm systems rather than a single activity. (Such as, if cultivating a particular tree crop takes land previously grazed by animals, the real incentive for the farmer takes account of the loss of production of the animals.) A farm systems approach would have possibly significant differences compared with single-commodity analysis.

### b. M&E Implementation

The project's M&E program was implemented by the Agency for Agricultural Development with part of data collection by the Regional Agricultural Directorates. This fitted in with the existing institutional structure and processes for monitoring under the Plan Maroc Vert. This has the evident advantage of operating M&E within the same organic structure as the national program. However, this may have contributed to the project M&E system's limited assessment of the project's qualitative impact. Yet, especially a pilot project where assessment of impact is a core need (The national agricultural development program data system is primarily on physical progress.), a more impact oriented M&E system would have been appropriate.





c. M&E Utilization

The M&E program provided the information for measuring the monitorable indicators, and served as part of the information on project progress for Government and the Bank. However, qualitative data was not present, limiting the usage of M&E for assessing impact. The M&E program was more in the nature of a Management Information System, useful in this role but not much beyond this. (Current actions should help in this regard. The ICR refers to the desirability of developing a methodology for measuring the impact, and longer term impact, of adopting climate change adaptations.)

Overall assessment of M&E.

M&E was able to provide data for the project's monitorable indicators. But the indicators were focused almost exclusively on physical targets, and knowledge of project impacts is limited. The Quality of M&E was Modest.

M&E Quality Rating  
Modest

## 11. Other Issues

a. Safeguards

The project triggered two safeguards policies - OP 4.01 - environmental assessment and OP 4.09 on pest management. The project was classified as Environmental Category B on the grounds that it would help reduce the vulnerability of small farmers to climate risks and improve management of land and water. A Framework study of environmental and social impacts, and for each sub-project, an Environmental Assessment and Environmental Management Plan, was prepared and disclosed.

The main focus during project implementation was on constraining the use of agro-chemicals. Mitigation measures included crop varieties that were more resistant to disease, and training farmers in safe use of chemicals.

A study was commissioned under the project (in 2015 by the Agency for Agricultural Development) on safeguards implementation. This found that the safeguards policies were being implemented following the guidelines. However, several shortfalls were identified in this paper and other sources. First, the bounds of environmental policies and actions - investigation and action plans - with their primary focus on pesticide management - were too narrow. The ICR comments that, amongst other areas for environmental monitoring and actions, surface and groundwater management should also have been included. Secondly, environmental management plans could have provided more practical guidance on how to implement the plans. And third, more attention could have been placed on environmental monitoring at appraisal (the results framework does not include environmental compliance indicators).

As concerns social impacts, no social safeguards were triggered and no special study or screening processes were put in place. A social development specialist was not part of the Bank supervision team. The ICR (para 47) comments that this was a possible shortfall as there were some broader issues on farmer participation that might have benefitted from such a specialist. This makes sense. A project of this nature requires extensive community interactions - even on such basic matters as the use of land and water. More assessment of gender roles might have led towards higher household productivity and better social inclusion.

b. Fiduciary Compliance

There were no issues relating to compliance, either in financial management or procurement.

Procurement.

Procurement was cumbersome as there were 103 contracts for goods and services, and 49 consultants contracts, and contracts were small - less than \$30,000 per contract. Nevertheless, a post-procurement review of all contracts signed in the April 2012 - April 2013 period, found that procurement processes were largely satisfactory.

Financial Management.

There were substantial delays between expenditures and disbursements, largely due to an overly layered bureaucracy - in particular, of central and local participating entities in the expenditure chain. There was some confusion regarding responsibility for auditing, the Agency for Agricultural Development, hiring an external auditor while Government preferred a public agency. Budget planning was initially rigid, but later became more flexible.



c. Unintended impacts (Positive or Negative)

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d. Other

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## 12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Moderately Satisfactory	Weak M&E and limited data to assess project outcome, particularly important for a pilot project.
Risk to Development Outcome	Modest	Substantial	Technologies, farmer adoption without subsidies, and impacts insufficiently known at this stage.
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Borrower Performance	Satisfactory	Satisfactory	---
Quality of ICR		Substantial	---

### Note

When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.

The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

## 13. Lessons

The project's experience yields the following main lessons: (variants of lessons 1 to 3 are also discussed in the ICR.)

1. *The monitoring of project impact is particularly important for a pilot project testing technological changes.*

The M&E of the project was primarily management information to monitor project progress and physical achievements. There was little monitoring of the impact of the innovations on yields and sustainability, and, therefore, only a limited empirical basis for knowledge-based mainstreaming. (sections 3b, 4 and 10).

2. *Integration of a pilot project within the institutional structure and processes of the agencies responsible for project activities, sets a better stage for subsequent mainstreaming.*

The project was implemented by the agencies normally responsible for the sector, entirely using the existing central and regional agencies. (In this case, even a PIU was eschewed). By using Morocco's existing institutional structure, subsequent mainstreaming of successful pilot activities is reported in the ICR as being easier. (section 3b)

3. *When addressing strategic priorities, but where knowledge of how to implement programs to help respond to the priorities is limited, a small pilot project, can lever large change. The pilot can provide practical experience for designing and implementing a subsequent scale-up based on lessons from the pilot. Measuring impact should be a core part of such a piloting exercise.*

The project has provided valuable experience for scaling up a climate change adaptation program. It would have been more valuable if the impacts of the different technologies had been systematically assessed.

4. *Project objectives need a context of higher goals.*

This project's objective - "to strengthen the capacity of" ..... "institutions and farmers" to "integrate climate change adaptations" (by farmers) - makes no reference as to what impact, or higher level goal(s), the project is expected to achieve. In other words, specifying more precisely what is meant by "integrating climate change adaptations." The implicit goals might have included effects such as yield increases, lower costs, more resilience to extreme climatic events, and other benefits. This context would better sharpen actions towards the project's ultimate goal to introduce effective climate change adaptation technologies. However, the project's log frame and M&E program was on physical progress. Questions such as the benefits from training (rather than only the numbers trained), and yield changes and resilience compared with non-project farmers, would better link purpose and action.



## 14. Assessment Recommended?

Yes

Please explain

As part of a review of project experiences with agricultural climate change adaptation in several countries, to compare issues and lessons for future projects.

## 15. Comments on Quality of ICR

The ICR is a thorough assessment, and the discussion is candid throughout. The report is informative, and provides sufficient sector background. It is also thoughtful in discussion of the lessons and in the text discussion leading to them. It is reflective, including in Section 2.4 on the Environment and Fiduciary Compliance. Annex 2 (on Outputs by component), provides a knowledgeable review, much of it an analytical discussion (but with limited impact data) of experience and impacts. The Beneficiary Survey and the Summary of the Borrower's ICR provide (some) information on different technical packages, and a sense of the Borrower's enthusiasm to move forwards.

The ICR could have been improved in several respects, all related to project impact and M&E. First, the minimal data on project impact could have been reviewed in greater depth. For a pilot project such as this, the issues with M&E and project impacts could have been more extensively reviewed. Second, while impact data is very limited, from the discussion in Annex 2, and possibly elsewhere, more observations and qualitative assessments, and proxy data, might have been brought in to the discussion of efficacy (some additional data has since been provided to IEG by the task team). Third, the basis for a larger follow-on operation could have been more explicit, given the sparseness of impact data on which to judge its utility. Notwithstanding, in other respects the ICR is a strong and thoughtful document, and its Quality is Substantial.

- a. Quality of ICR Rating  
Substantial