Report Number : ICRR0020025

1. Project Data

Project ID P103922	Project Name RY:GEF Agrobiodiversity and Adaptation
Country Yemen, Republic of	Practice Area(Lead) Agriculture

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
TF-96330,TF-98754	05-Mar-2015	5,298,000.00
Bank Approval Date	**Closing Date (Actual)**	
27-May-2010	05-Mar-2015	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	0.00	6,775,700.00
Revised Commitment	0.00	6,775,700.00
Actual	0.00	5,327,968.11

Sector(s)
Public administration- Agriculture, fishing and forestry(36%):Crops(30%):General agriculture, fishing and forestry sector(30%):Agricultural extension and research(2%):Tertiary education(2%)

Theme(s)
Climate change(75%):Biodiversity(25%)

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2. Project Objectives and Components

a. Objectives

The Project Appraisal Document (PAD, p. vii) and the Global Environment Facility Trust Fund Grant Agreement (p. 5) stated that the Project Development Objectives were to:
"(a) enhance capacity and awareness at key national agencies and at local levels, to respond to climate variability and change; and (b) to better equip local communities to cope with climate change through the conservation and use of agrobiodiversity."
The Japanese Sustainable Development Fund Grant Agreement (p. 3) stated that the objective of the Project was to: "provide a suite of options to poor and vulnerable farmers in the highlands, particularly women, to cope with climate change."

This review evaluates the project against the objective as stated in the GEF Trust Fund Agreement.

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

No

c. Components

1. Agro-biodiversity and Local Knowledge Utilization and Assessment [Appraisal Cost: US$0.37 million, Actual Cost: US$0.39 million]. This component aimed to prepare inventories of landraces and other agro-biodiversity and develop vulnerability profiles of selected landraces. This would generate Information to enhance and develop agro-biodiversity-based coping strategies in place. Activities financed under this component would include: (a) preparation of inventories of local agro-biodiversity and knowledge from farmers on adaptive characteristics of local landraces and wild relatives of crop species; (b) development of climate resilience profiles of selected landraces, after testing and piloting for resilience to impacts of climate change; and (c) preparation of a feasibility report for the development of micro-enterprises using this agrobiodiversity. This will indicate the potential for alternative income generation through sustainable use of agro-biodiversity in the area. It includes the following Sub-components:
1.1 Agro-biodiversity Inventories;
1.2 Development of Climate Resilient Profiles of Selected Landraces; and
1.3 Micro Enterprises Assessment Report on Agro-biodiversity Utilization and Development of Business Plans for Income-generation.

2. Climate Change Modeling and Capacity Building [Appraisal Cost: US$0.85 million, Actual Cost:US$1.58 million]. This component aimed to lay the foundation for development of national capacity in climate modeling and data analysis. This was expected to enhanced capacity of national institutions to develop climate scenarios based on regional climate models. This component would finance activities which were expected to be the building blocks for developing capacity in climate change analysis and modeling. It includes the following Sub-components:
2.1 Development of Improved Climate Database;
2.2 Downscaling Climate Models;
2.3 Training and Technical Capacity Development; and
2.4 Sharing Climate Information Inputs and Outputs.

3. Integrating Climate Change into Rainfed Agriculture [Appraisal Cost: US$3.40 million, Actual Cost: US$2.73 million]. This component aimed to develop a strategic approach to integrate climate change into rainfed agriculture. It includes the following Sub-components:

3.1 Raising Awareness and Capacity Building at National and Local Levels on Climate Change.
3.2 Piloting Coping Strategies at Local Landscape Units.
3.3 Preparation of a Climate-Resilient Agriculture Strategy for Rainfed Highlands.

4. Project Management, Coordination, and Monitoring and Evaluation [Appraisal Cost: US$0.68 million, Actual Cost: US$0.38 million]. This component aimed to enable effective coordination and management of the Project, monitoring, and improved coordination. Project implementation will be overseen by the Groundwater and Soil Conservation Project Coordination Unit. Overall strategic guidance for the Project would be provided by the Steering Committee chaired by the Minister for Agriculture and Irrigation. A Technical Coordination Committee chaired by the Deputy Minister for Irrigation and Land Reclamation and comprising members the Civil Aviation and Meteorology Authority, the National Water Resources Authority, the Agricultural Research and Extension Authority, and others would be established to provide technical advice on an *ad hoc* basis for the project.

The components of the Japanese Sustainable Development Fund (JSDF) Grant were the following:
1. **Community Natural Resource Management Planning [Appraisal Cost: US$0.17 million, Actual Cost: US$0.05 million].** This was to develop community natural resource management plans for the preservation of local agro-biodiversity. It was linked with Component 3.2.

2. Establishment of Small Income Generation Projects [Appraisal Cost: US$1.06 million, Actual Cost: US$0.67 million]. This was to develop and carry out small income generation projects in selected communities, and particularly among women, for agro-biodiversity conservation and adaptation. This was also linked with Component 3.2 of the GEF Grant.

3. Small-Scale Upgrading and Capacity Building [Appraisal Cost: US$1.04 million, Actual Cost: US$0.82 million]. This was to develop and carry out small-scale upgrading of infrastructure in selected communities for agro-biodiversity conservation and adaptation. This was linked with Component 3.2 of the GEF Grant.

4. Community Awareness Raising Program [Appraisal Cost: US$0.25million, Actual Cost: US$0.11 million]. This was to carry out a community awareness program related to agro-biodiversity conservation and adaptation in rainfed areas. It was linked with Component 3.1of the GEF Grant.

5. Project Management [Appraisal Cost: US$0.26 million, Actual Cost: US$0.19 million]. This was to support project implementation management and administration, including monitoring and evaluation and audits of the above activities under the JSDF Grant. This was linked to Component 4 of the GEF Grant.

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

Project Cost. Total project cost at appraisal was expected to be US$5.30 million (PAD, Annex 5). The ICR (Annex 1) reported that the actual project cost was US$5.08million. In February, 2011, the project received a Grant worth US$2.8 million through the Japanese Sustainable Development Fund (JSDF) to assist in the financing of the project. This brings the appraisal total project cost to US$8.1 million and the actual project cost was US$6.92 million.

Financing. The Project was financed through a GEF Grant worth US$4.00 million. Also, the project was expected to receive a Grant worth US$0.6 million as parallel financing from the Policy and Human Resources Development Fund (PHRD) under the Climate Change Initiative (CCI), however, the CCI Grant closed on July 10, 2011 and the related funds were no longer available (Restructuring Paper, p. 1). In February, 2011, the project received a Grant worth US$2.8 million through the Japanese Sustainable Development Fund (JSDF) to assist in the financing of the project. Actual amounts disbursed according to the project portal were US$3.77million (94.25%) for the GEF Grant and US$0.22 million were not disbursed while the JSDF Grant disbursed US$1.55 million (55%) and US$1.2 million were undisbursed. The ICR reported slightly different figures.

Borrower Contribution. The Government of Yemen was expected to contribute US$0.42 million of counterpart funding and project beneficiaries were expected to contribute US$0.28 million (PAD, Annex 5). The ICR (Annex 1) reported that the actual contributions were US$0.28 million (67% of appraisal estimate) and US$0.12 million (41% of appraisal estimate) for the Government and beneficiaries, respectively.

Dates. The project closed six months later than the expected closing date. The project was restructured twice, both Level 2 restructuring. The first was on June 27, 2013 in order to modify the project implementation arrangements; adjust the financing plan; introduce "Selection of Individual Consultants" as an additional method for procurement of consultant's services; and modify the date of the mid-term review from August 31, 2012 to March 31, 2014. The second was on July 30, 2014 in order to extend the closing date by about six months from August 31, 2014 to March 5, 2015 to account for start-up delays associated with the socio-political events of late 2010 and 2011 (ICR, para 13). Mid-Term Review took place on March 31, 2014 compared to an original date on August 31, 2012. This delay was due to the slow start and lack of sufficient implementation progress of the project (Restructuring Paper, para 13).

3. Relevance of Objectives & Design

a. Relevance of Objectives

At appraisal objectives were highly relevant to the country conditions given the rainfall variability and uncertainty of climate models. Objectives were in line with the adaptation vision of the Government's National Adaptation Program of Action (NAPA). Objectives directly contributed to the NAPA's vision for agriculture, which aimed to protect Yemen's agricultural diversity from degradation, maintain agricultural resources and develop sustainable agricultural programs, taking climate variability and change into consideration. Also, the Government 's Socioeconomic Development Plan for Poverty Reduction (SDPPR 2006-10) identified increasing the efficiency of rainfed agriculture as one of its strategies to address rural poverty. Objectives were also in line with the World Bank Country Assistance Strategy for Yemen (FY10-13), which among other things called for helping the country manage natural resources scarcity and natural risks. Objectives were also consistent with GEF's 'Strategic Priority on Adaptation' under the Climate Change focal area.

At completion, the country is still experiencing political instability and civil war. As a result of military operations, Yemen suffered severe infrastructure damage in different areas of the country. Under the current situation, it is difficult to argue that the objectives of the project are highly relevant because any Government that is formed in Yemen would probably focus on reconstruction efforts, for the short/medium term at least. Therefore relevance of objectives at completion is rated substantial.

Rating
Substantial

b. Relevance of Design

The Results Framework provided clear and logical links between inputs, outputs and expected outcomes. The project was designed as a pilot operation that would be implemented through the Project Coordination Unit of the IDA-financed Ground Water and Soil Conservation Project. This arrangement was expected to increase the leverage of the project in influencing policy dialogue within the Ministry of Agriculture and Irrigation and with other implementing agencies. To achieve the stated objectives, design featured four components. The Project would support the country to develop climate change-related policies by improving strategies at relevant agencies. The first component would contribute to achieving the first objective through generating information to enhance and develop agro-biodiversity-based coping strategies. The second component would contribute to achieving the first objective through capacity building activities that would enhance the capacity of national institutions to develop climate scenarios based on regional climate models. The third component would contribute to achieving the second objective through developing a strategic approach to integrate climate change into rainfed agriculture and implement pilot coping strategies; policies and investment plans of rainfed agriculture that reflect climate considerations. The project was expected to increase options for affected communities and individuals within them. These options were expected to strengthen their capacity to cope with climate change. The fourth component focused on project management.

Rating
Substantial

4. Achievement of Objectives (Efficacy)

Objective 1

Objective
a) enhance capacity and awareness at key national agencies and at local levels, to respond to climate variability and change. Substantial.

Rationale
Outputs

- A strategy for climate-resilient agriculture for rainfed highlands was prepared and finalized in consultation with key stakeholders. Application of the strategy within the key national agencies commenced with technical specialists undertaking climate modeling, receiving training, and using data sets developed under the project. However, the final stage of formal adoption was not completed because of political crisis and ongoing war. (Target partially achieved).
- The Project developed a sustainable climate information system (CIS) with harmonized standard information, and requisite organizational arrangements associated with climate data collection.(Target achieved).The CIS is equipped with required equipment and tools. The stakeholders can access the CIS via the web.
- Local data sets were developed and local capacity to predict regional climate change based on global circulation model output was improved. By project completion 15 (target: 8) technical specialists were trained in climate related agencies to undertake climate modeling.
- Eight automatic weather stations (with software and communication units) were installed at selected sites.

- The plan for long-term training for M.Sc. degree was replaced with more cost-effective capacity building training. These included: 10-day training on collection of data for 20 participants; 10-day training on exchange of data between relevant institutions for 20 participants; and 12-day training on climate modeling for 14 participants.

Outcome
The project supported data collection through surveys, collation, and collaboration with relevant agencies to create a database for climate projections. In addition, it supported facility analysis to identify and strengthen selected weather stations; and successfully installed eight automatic weather stations. The project also provided capacity building activities to staff of relevant institutions in technical aspects of climate modeling. In addition, the project carried out a special survey and modeling in selected areas on impacts of rainfall variability as part of a Climate Resilient Agricultural Strategy for highland areas in Yemen. While the Strategy for Climate Resilient Agriculture for rainfed highlands was prepared and finalized, formal adoption of the Strategy has yet to be completed. The delay in formal adoption was attributed to the political crisis and ongoing war (ICR, para 34). Despite this shortcoming, the available evidence point to a substantial achievement of this outcome.

Rating
Substantial

Objective 2

Objective
b) to better equip local communities to cope with climate change through the conservation and use of agrobiodiversity. Substantial.

Rationale
Outputs

- A total of 1603 crop landraces and 9 landraces of famous fruit trees were collected and kept in the Gene Bank at the Agriculture Research and Extension Authority (Target achieved).
- By project completion, the Agriculture Research and Extension Authority tested 46 landraces (target: five, target exceeded) for five crops (sorghum, wheat, barley, lentils, and peas). To carry out the testing of the 46 landraces, the Project utilized an Agriculture Research and Extension Authority laboratory that had been financed under the project.
- Three training programs were implemented on raising awareness of selected landraces among the farming communities, strengthening of community organizations, and preparation of community plans.
- The Project made a detailed assessment of the vulnerability of rainfed agriculture to climate change.
- The Project implemented an awareness program for three days in each of the eight targeted districts. 921 community participants (520 men and 401 women) from the eight targeted districts attended. The training was on the importance, utilization, and the role of farmers' communities in agro-biodiversity conservation and coping mechanisms to address climate change.
- The project trained 70 beneficiaries on income generation activities in two districts using JSDF funds. The Project also trained the communities on how to prepare their community plans and implement them. 734 of the community leaders (368 men and 366 women) attended this training.
- The Project provided four two-day training workshops for the Water Users Groups (WUGs) and the Associations in all the targeted districts on how to formulate their own community plans, supporting natural resources conservation and with emphasis on agro-biodiversity. 480 participants from the WUGs participated in these workshops and 10 WUGs developed their plans. This activity was financed by JSDF funds.
- The Project completed and tested 122 small-scale infrastructure items (target: 20) , these included: 43 terraces, 52 water tanks, 13 soil conservation and 14 wadi banks.
- 91 small-scale infrastructure upgrading projects were undertaken using JSDF funds, which were tied to conservation of water, soil, terraces, crops, and seeds and which sought to maximize the use of local knowledge and adaptation practices.
- A total of 74 income generating projects were supported. These were dominated by beekeeping and animal raising activities which

were most demanded among the farmers.

- The Project constructed community seed stores and community centers in two governorates (target: 4). Seed stores and the associated building constructed by the Social Fund for Development under World Bank-funded Rainfed Agriculture and Livestock Project in the two other Governorates were considered to be adequate with no need to construct additional seed stores under this project. The Project also established two model farms at two locations. The model farms were cultivated with fruit trees: almonds and coffee.

Outcome

The projected promoted awareness of agro-biodiversity and natural resources conservation; and supported coping mechanisms to address climate change at the community level in eight targeted districts. Also, it supported the preparation of community natural resources conservation plans with various water users groups as well as the implementation of coping strategies based on infrastructure and engineering interventions.The laboratory financed by the project enabled the Agriculture Research and Extension Authority, for the first time in Yemen, to conduct molecular analysis on the selected landraces. The landraces that had stability and climate resilience under different environmental zones were then submitted to the General Seed Multiplication Corporation for multiplication and dissemination. The project also financed income-generating activities which had agro- biodiversity conservation as its basis. While the project met or in some cases exceeded its targets, the scaling up was delayed due to the political crisis and ongoing war. Based on the available evidence provided in the ICR, the achievement of this outcome is rated substantial.

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Rating
Substantial

5. Efficiency

Economic and Financial Efficiency

ex ante

Planning adaptation is challenging given the many uncertainties relating to climate change scenarios and socio-economic pathways, which ultimately impact the projections of the patterns of exposure and vulnerability to climate change. Therefore, the Real Option Methodology was chosen because compared to the standard cost-benefit analysis, it would adequately appraise the additional economic value of more flexible adaptation strategies. The Real Option Methodology provided a framework to evaluate adaptation projects at an early stage of preparation, not only on the basis of the expected amount of adaptation to be achieved, but also in terms of the increase in flexibility associated with decisions (adaptability), with a view to test the methodology and gain insights for the project design. The methodology applied consists of a 3-step procedure: (a) identifying the stakeholders of the process of adaptation to climate change, (b) eliciting information from stakeholders on the main features of this process through narratives and stylized facts obtained from participative interviews and systematic survey techniques, and (c) exploring and evaluating main options to deal with the climate change and the corresponding capabilities. Specific effects of climate change in Yemen are still largely uncertain, but the stakeholders' interviews carried out in the study suggested that there was wide consensus on four features: (i) an increase in the average temperature (and perhaps a decrease in the rainy season), (ii) a variation (increase or decrease depending on a variety of circumstances) of average rainfall, (iii) an increase in the volatility of rainfall, (iv) an increase in frequency of extreme events (droughts and floods). Four general types of options were identified, whose underlying asset (i.e. the benefit expected from the contingent action to be undertaken), respectively, concerns the need to: (i) reduce the damages of transitory adverse events (coping options), (ii) exploit favorable developments (opportunity options), (iii) recover and gain strength from negative developments/events (rebound options), and (iv) adapt to permanent changes (adaptation options). The PAD (Annex 10, table 11) provided Option Values and Extended Net Present Values under alternative volatility scenarios induced by climate change. The analysis did not include an overall ERR or FRR for the project investments.

ex post

The ICR did not attempt to reconstruct the analysis conducted at appraisal due to the lack of data and the impossibility to conduct field work due to the security situation on the ground. In addition, this methodology was not well documented at appraisal and was not aligned with the M&E system established under the Project (ICR, para 48). Alternatively, the analysis of efficiency was based on cost-effectiveness both at the project level as well as at the level of components. The cost-effectiveness of the project was compared to that of the IFAD-financed Murat River Watershed Rehabilitation Project (Turkey) which had similar objectives and targeted about 80,000 beneficiaries. The cost per beneficiary of the project at US$55.8 compares favorably with that of Murat River Watershed Rehabilitation Project at US$481, however, activities funded under the later project were more diverse in nature and not exactly identical to those funded under ACAP. For Component 1, cost was US$ 0.39 million, implying that if just 3,368 ha benefited from the use of climate-resistant crop varieties, it would be cost-effective in one year. For Component 2, if the project was able to reduce the losses of one of the really large (over US$1 billion) flood losses by only

about 0.15% then Component 2 cost of US$ 1.58 million would be cost effective. For Component 3, net benefits were mainly generated by two types of investments: (i) interventions to reduce and mitigate climate change damages at the community level (terraces, water tanks, wadi banks, soil conservation) and (ii) small-scale, income-generating activities. The benefit-cost ratio for the first type of interventions ranged from 1.0 to 2.9 (average 1.75), signifying cost-effectiveness; while for the second type of interventions, sheep/goat rearing was possibly the most representative, generated net benefits greater than the initial investment by year three/four and were cost-effective as well. The Real Options methodology used at appraisal was not conducted in the ex post analysis because it was not well documented at appraisal and was not aligned with the M&E system established under the Project (ICR, para 48).

Administrative and Institutional Efficiency
The project closed late by six months. It suffered initial implementation delays; and political instability in late 2010 and through 2011 negatively impacted implementation. At completion, the project utilized about 55% of the JSDF Grant. This under utilization of Grant funds was mainly due to limited implementation capacity at the local level (ICR, para 36).

Efficiency is rated modest due to the absence of real project data to enable an accurate assessment of efficiency. While project cost per beneficiary compared favorably to these of the IFAD-financed Murat River Watershed Rehabilitation Project in Turkey, it should be noted that the later project financed a more diverse set of activities in a middle income country where implementation costs were expected to be higher compared to Yemen.

Efficiency Rating
Modest

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 ☐Not Applicable
ICR Estimate		0	0 ☐Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Relevance of objectives and relevance of design were both rated substantial. Efficacy of the first objective was rated substantial despite the delay in the formal adoption of the Strategy for Climate Resilient Agriculture. Efficacy of the second objective was rated substantial. The project successfully promoted awareness of agro-biodiversity and natural resources conservation; and supported coping mechanisms to address climate change at the community level in eight targeted districts. Efficiency was rated modest due to implementation delays and the absence of real project data which provided an inadequate basis for assessing efficiency. The Real Options methodology used at appraisal was not conducted in the ex post analysis because it was not well documented at appraisal and was not aligned with the M&E system established under the Project (ICR, para 48).

a. Outcome Rating
Moderately Satisfactory

7. Rationale for Risk to Development Outcome Rating

The country is currently experiencing an actual state of war with ongoing air raids and military operations on the ground. The internationally recognized Government is dysfunctional and does not control much of northern Yemen including the capital Sanaa. While many project-supported activities at the community level require limited support from the state, there is substantial concern for the sustainability of activities such as climate change and climate monitoring that are overseen by public institutions. There are also concerns that the project assets, for example the weather stations, would be lost due to lack of security.

a. Risk to Development Outcome Rating
High

8. Assessment of Bank Performance

a. Quality-at-Entry

- The Bank identified a project that would continue to support the agriculture sector in Yemen, while broadening the focus to meet the challenges posed by climate change. The project was one of the first pilot operations to address adaptation on the ground in a country selected for the Pilot Program on Climate Resilience.
- The project objectives were in line with the Government priorities for the agriculture and irrigation sectors in terms of improving food security and efficiency of water management.
- The project was strategically aligned with two other IDA funded projects, the Ground Water and Soil Conservation Project and the Rainfed Agriculture and Livestock Project. The Project would collaborate with the Ground Water and Soil Conservation Project to encourage water harvesting and increasing irrigation efficiency as part of a climate-resilient "win-win strategy". It would also collaborate with the Rainfed Agriculture and Livestock Project through its activities under Component 1, which were complementary to Component 1 of the Rainfed Agriculture and Livestock Project, to include climate considerations in the identification and improvement of local landraces of cereals and lentils.
- Design featured activities that aimed to assess and strengthen the capacity for climate analysis in relevant public institutions; and at the same time engage communities through the preparation of natural resource management plans and creation of income-generating activities which use local agro-biodiversity to enable sustainable management of the natural resources and diversify livelihoods.
- Design draws on the DFID-funded 'Real Options Methodology' which would estimate the costs and benefits of the adaption to climate change. This methodology used at appraisal was not conducted in the ex post analysis because it was not well documented at appraisal and was not aligned with the M&E system established under the Project (ICR, para 48).
- At the preparation stage 14 risks were identified, six of these were rated moderate, seven were substantial and one was rated low. While there were relevant mitigation measures included in the design, it was overly optimistic to conclude that all residual risks, particularly those related to sectoral institutions, would be addressed quick enough to justify that the risk would be reduced from substantial to moderate. Experience from different World Bank projects show that mainstreaming climate change related policies and changes in relevant institutions takes considerable time even under favorable implementing conditions. Despite identifying 14 risks, the risk assessment overlooked two important risks, first the possibility of political instability; and the possibility of facing difficulties in coordination among different public agencies at the national level.
- M&E design suffered from some weaknesses (see section 10a).

Quality-at-Entry Rating
Moderately Satisfactory

b. Quality of supervision

The project experienced a challenging environment during implementation starting with political unrest in late 2010 that extended to 2011 which eventually unfolded into a full scale war by 2015. The Bank was proactive in addressing implementation challenges. The supervision team provided detailed Aide Memoires that covered different aspects including fiduciary. Due to the deteriorating security situation and suspension of Bank missions, supervision increasingly relied on third part monitoring. In a further communication, the project team explained that third part monitoring was reliable and data provided from the field was documented with detailed pictures that included the date and specified the place.

Quality of Supervision Rating
Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. Assessment of Borrower Performance

a. Government Performance

The Government demonstrated ownership of the project and provided timely counterpart funding. The Government was also supportive to implementation arrangements and initiated restructuring requests. However, only 67% of the original counterpart funding amount was provided by the Government. The ICR did not provide further details on Government performance.

Government Performance Rating
Moderately Satisfactory

b. Implementing Agency Performance

The project was implemented under the Ministry of Agriculture and Irrigation, first through the Project Coordination Unit of the Groundwater and Soil Conservation Project (P074413) and after it closed on June 30, 2012 implementation responsibility was transfered to the Project Support Unit of the Rainfed Agriculture and Livestock Project (P089259). While both units were committed to project activities, the project suffered from significant startup delays. These were due to the severe and prolonged disruptions associated with the sociopolitical events of late 2010 and 2011 that broke out shortly after the project was launched in September 2010. Further delays were caused by the disbandment of the Project Coordination Unit in charge of the project implementation shortly after the parent project (Groundwater and Soil Conservation Project) closed on June 30, 2012. Financial Management and Procurement activities were adequate all over the implementation period. The ICR (para 52) highlighted that despite the partial destruction of the building housing the Bank's office in an air raid, the Project Support Unit continued to provide support to implementation activities.

Implementing Agency Performance Rating
Moderately Satisfactory

Overall Borrower Performance Rating
Moderately Satisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design

The projects Results Framework and Monitoring included two outcome indicators to assess the achievement of the two objectives. It also included eight intermediate outcome indicators to assess the achievement of activities under the three project components. The project's indicators were simple due to the pilot nature of the operation. However, there seems to be a disconnect between what the project intended to achieve and one of its outcome indicators which assessed the first objective. While the indicator stated a "strategy for Climate Resilient Agriculture for Rain-fed Highlands adopted and applied by key national agencies", design lacked a comprehensive vision of what it meant to have the strategy implemented. The set of indicators included in M&E design attempted to reflect the option value of interventions and monitor implementation progress by components, but were not designed to track project benefits in a quantitative manner.
After the project received additional JSDF financing, three indicators were added to monitor JSDF funded activities: (a) number of pilot communities that had developed plans for natural resource management focusing on conservation and adaptation planning based on agro-biodiversity resources; (b) number of beneficiaries, especially female, that were trained on water conservation, nutrition, natural resource conservation, beyond the 10-12 pilot villages and (c) number of community pilots using local knowledge & agro-biodiversity resources designed

and developed. At the same time four indicators were added to track the GEF financed activities including: (a) number of direct project beneficiaries; (b) percentage of female beneficiaries; number of client days of training provided; and (d) percentage of client days of training provided for females. In a further communication the project team explained that most of these indicators were core indicators that the Bank introduced around 2012 and at that time ongoing projects were required to reflect them in their M&E design.

b. M&E Implementation

M&E implementation was handled by the Project Coordination Unit (PCU) of the Groundwater and Soil Conservation Project up to its closure on June 30, 2012 when implementation of M&E was transferred to the Project Support Unit (PSU) of the Rainfed Agriculture and Livestock Project. Both implementation units, according to the ICR (para 22) were well staffed and received adequate training and supervision. It was not clear whether the transition of M&E implementation from the PCU of one project to the PSU of another had any negative impact on M&E implementation. The PCU and the PSU maintained the project's M&E data separately, however, it was not clear how such separation enabled Bank supervision to report M&E data more accurately as reported by the ICR (para 22).

c. M&E Utilization

M&E data enabled project management to make allocations of funds based on what was progressing well. However, M&E design did not allow the utilization of the options methodology, as envisioned at appraisal, to assess the project's efficiency.

M&E Quality Rating
Modest

11. Other Issues

a. Safeguards

The project was classified as environmental category B (PAD, Annex 10). It triggered the following safeguard policies: Environmental Assessment (OP 4.01) and Pest Management (OP 4.09). The Safeguard Policy OP 4.12 on Involuntary Resettlement was initially triggered as a precautionary measure. However, OP 4.12 was later un-triggered after the preparation team further defined the project components, sub-components, and activities. It was confirmed with the Regional Safeguards Coordinator that project activities would not result in: involuntary taking of land; relocation or resettlement; loss of assets or access to assets, and loss of income sources or means of livelihood.
Environmental Safeguards. An Environmental and Social Impact Assessment (ESIA) was carried out which was also accompanied by an Environmental and Social Management Plan (ESMP) and a brief Integrated Pest Management Plan (IPM). Environmental monitoring followed the regular monitoring events established for the Project and inclusion of updates in progress reports. In addition, a national environmental consultant was hired in September 2014 to assess the environmental and social impact of the Project. The ICR (para 27) reported that as a result of the suspension of Bank missions and site visits, the Bank team relied on a third party monitoring firm to supervise project activities and the ensure safeguards compliance.
Social Safeguards. The Involuntary Resettlement (OP 4.12) safeguard policy was not triggered by the Project as the land for the construction of water tanks and other small infrastructure was obtained through voluntary donations from the local communities (and documented). Processes and procedures for voluntary land donation was included in the Project Operational Manual.
In a further communication, the project team confirmed that the project was in compliance with the Bank's safeguards policies.

b. Fiduciary Compliance

Financial Management. The PCU and then the PSU had qualified financial management staff, automated accounting system, acceptable FM manual, monthly reconciliation, and timely reporting. All audit reports (by the external auditors) were submitted to the Bank with unqualified opinions and were found acceptable. Due to the security situation in the country, the final audit report was overdue since 30-Jun-2015 and was expected by 30-Sep-2015.

Procurement. Procurement operations benefitted from the experience of the Ministry of Agriculture and Irrigation, which had adequate capacity for managing and implementing procurement-related processes for Bank-financed projects. A procurement post-review, based on a desk review, found that most payment reviews of project transactions showed that funds were claimed for eligible expenditures, properly recorded and reported, and that all related supporting documents were in order and filed accordingly (ICR, para 28).

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	Modest efficiency due to implementation delays and the absence of real project data that would enable an accurate assessment of efficiency.
Risk to Development Outcome	High	High	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Borrower Performance	Satisfactory	Moderately Satisfactory	The ICR provided an inadequate basis for assessing Government Performance. Moreover, despite strong efforts by the Implementing Agency, there were significant start-up and implementation delays.
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 following lessons are emphasized with some adaptation of language:

- **To improve relevance of a project, utilize participatory beneficiary involvement in planning/design of activities.** The project experience demonstrated that beneficiary participation made the project more relevant to the needs of a specific community, even when similar activities were carried out in different locations. This was the case with coping strategies where, because of community participation, there was often an increased demand for smaller water tanks. It also led to easier transition to participatory beneficiary involvement during implementation. With beneficiary involvement during implementation, temporary jobs were created and targeting improved because the unemployed/under-employed were more available to participate.
- **Global benefits could be achieved and sustained only if they are consistent with national policies and priorities.** When the goal is to deliver climate change-related global benefits, project design must build national policies and priorities, because project activities at the

local level can only be sustained if they fit national policies and priorities. The centrality of developing national policies and priorities cannot be overstated. Specifically, the project's approach to development of national policies relied upon climate modeling and database-related training, among other things. In addition, much of the priority setting at the national level required focusing on rainfed agriculture, which had been achieved through RALP and which preceded this Project.

- **Building partnerships and understanding among project implementers and communities over a period of time is critical for the success of community-based biodiversity/climate change projects.** The understanding was achieved under two Bank projects, Ground Water and Soil Conservation Project and Rainfed Agriculture and Livestock Project, which preceded this project. Although the reduction in overhead cost from piggy-backing Project Coordination Unit/Project Support Unit of Bank projects is often acknowledged, this benefit to GEF projects, from past Bank interventions in building partnerships, is not well understood.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The ICR provided coverage of project activities, to the extent possible given the security challenges, and candidly reported on most shortcomings. Despite M&E weaknesses and the inability to conduct an ICR mission due to the security situation, the ICR (through third party monitoring) provided a logical discussion of outcomes. The ICR also included relevant lessons that reflected the project's experience. However, there were some weaknesses including:

- Limited discussion on supervision specifically on how the project was supervised with ongoing political unrest;
- No clear statements on environmental policy compliance as well as fiduciary compliance; and
- Limited discussion on Government performance.

a. Quality of ICR Rating
Substantial