



Report Number : ICRR0020791

1. Project Data

Project ID

P110538

Project Name

FERGHANA Valley Water Resources Mgt

Country

Uzbekistan

Practice Area(Lead)

Water

L/C/TF Number(s)

IDA-46480

Closing Date (Original)

31-Jul-2016

Total Project Cost (USD)

0.00

Bank Approval Date

24-Sep-2009

Closing Date (Actual)

31-Dec-2016

IBRD/IDA (USD)
Grants (USD)

Original Commitment

65,544,000.00

0.00

Revised Commitment

51,806,447.84

0.00

Actual

48,818,076.16

0.00

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2. Project Objectives and Components

a. Objectives

The objective of the Project according to the Financing Agreement was to improve agricultural production in areas affected by water-logging, and to reduce damage to housing and infrastructure from rising ground water levels and salinity in the Project Districts.

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



No

c. Will a split evaluation be undertaken?

No

d. Components

The PAD partitioned the project into three major components. The main activities in these components and their total costs are summarized below.

Component 1: Improvement of Irrigation and Drainage Network (Appraisal: US\$71.6 million; Actual:US\$42.05)

This component aimed to address the problem of high ground water levels (GWLs) by financing improvements in surface irrigation & drainage (I&D) network as well as installation of subsurface horizontal drainage wells and vertical drainage wells (VDWs). This included several main activities: (i) improvement of irrigation network; (ii) improvement of the surface drainage network; (iii) improvement of VDWs and groundwater development and management in the field and in settlements (including upgrading of drainage systems in Rishtan town); (iv) investments in nature protection according to the Environmental Management Plan; (v) cash compensation and other forms of assistance for 37 negatively affected individual leasehold farms by I&D construction activities in accordance with the Resettlement Policy Framework (RPF) and Specific Resettlement Action Plan (RAP); and (vi) payments for various consultancy services (engineering designs, construction supervision, etc.).

Component 2: Institutional Strengthening and Agricultural Development Support (Appraisal: US\$6.09 million; Actual:US\$3.35)

This component sought to support institutional strengthening of public institutions and private farmers' organizations involved in water management and utilization. The support included supply of operations and maintenance (O&M), laboratory, information technology, and office equipment and training and study tours. Main activities included: (i) Institutional Strengthening and provision of training to regional and local staff of public water management institutions (Basin Irrigation System Authority, Administration of Main Canals, Pump Station Department and Hydrogeology and Amelioration Expedition - BISA, AMC, PSD and HGAE) as well as institutional strengthening and training support to the Oblast and Raion offices of the State Committee for Nature Protection (SCNP) for environmental management and monitoring with respect to I&D systems; establishment of a Supervisory Control and Data Acquisition System (SCADA) for monitoring of GW observation wells in the three districts and provision of training to the staff; (ii) Dissemination of modern agricultural and water management practices to members of Water Users Associations and small dehkhan farmers through provision of Training and establishment and operation of field Demonstration Plots (DP), including pilot drip irrigation, on-farm water management, and (iii) Provision of technical assistance for drafting a new Water Code and the legislation and regulations related to water users' associations establishment and operations.

Component 3: Project Management, and Monitoring and Evaluation of Project Impact (Appraisal: US\$4.35 million; Actual:US\$3.63)



This component aimed to finance strengthening the capacity of the Ministry of Agriculture and Water Resources (MAWR) and the Project Implementation Unit (PIU) for project management and M&E by providing goods, consultant services, project audit, and training, and financing of operating costs. This also financed operational expenditures of the PIU in Tashkent and Rishtan; provision of consultancy services for project management, M&E of project impacts, and independent auditing of project accounts; and provision of equipment and goods for project management. It also planned to finance TA for the preparation of future priority projects in the water resources management sector.

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

Project Costs: The full cost of the project at appraisal was **US\$81.85 million**. The actual cost at the time of closing (excluding VAT, Customs, and Non-Resident Income Tax) was US\$49.03 million.

Financing: The project was financed through an IDA Specific Investment Lending (SIL) credit of SDR 42.2 million (equivalent to US\$65.54 at the time of appraisal). The actual IDA financial contribution was US\$48.82 million.

Borrower Contribution: The Government of Uzbekistan as Recipient committed US\$ 16.31 million at appraisal (including VAT, Customs, and Non-Resident Income Tax) which eventually became US\$0.21 million (excluding VAT, Customs, and Non-Resident Income Tax) at the project's close.

Dates: The project was approved on September 24, 2009 and was expected to be closed on July 31 2016 but closed on December 31 2016. The mid-term review (MTR) was planned for Oct 1 2013 but undertaken on 11 November, 2013.

Restructuring: The first Level 2 restructuring was approved in April 2015 to formalize agreement that was made during the MTR. The second Level 2 restructuring was approved in December 2015 to allow a small reallocation of funds. The third Level 2 restructuring was approved in July 2016 to allow a five-month extension to December 31, 2016.

3. Relevance of Objectives & Design

a. Relevance of Objectives

As the ICR indicates, the project objective of improving agricultural production and reducing land degradation in irrigated areas was well aligned with Country Partnership Framework (CPF) Focus Area 2 "Agricultural competitiveness and cotton sector modernization" and contributes to the achievement of two CPF objective indicators: "Cotton productivity increase" and "Increase in areas under horticulture, fodder crops, and other crops (non-cotton/wheat)". The project objective of reducing damage to housing and



infrastructure was consistent with CPF Focus Area 3 “Public Service Delivery”. Under Results Area 1, the Uzbekistan Country Assistance Strategy (CAS) also emphasized “Improving water resources management and climate change preparedness”. This section highlighted “Bank support to upgrade and improve the efficiency of the irrigation and drainage network in selected districts will continue through two ongoing projects -... *Ferghana Valley Water Resource Management-Phase I*—and in FY13 a proposed *South Karakalpakstan Drainage Project* in northwest Uzbekistan, one of the country’s poorest regions” (CAS: paragraph 53). Increasing agricultural productivity, land restoration, and modernization of irrigation and drainage systems were also relevant to the GOU’s Program of Action for 2015 and subsequent years to achieve its strategic objectives for economic development. Uzbekistan’s Development Strategy for 2017-2021 under section 3.2 prioritizes the “Modernization and Intensive Development of Agriculture”, including further “improvement of irrigated lands, development of the network of reclamation and irrigation facilities, widespread introduction in agricultural production of intensive methods, especially modern water- and resource-saving agricultural technologies, using high-performance agricultural machinery”. This suggests that the project’s objectives remained highly relevant to the CPF, CAS and the development strategy of the GOU.

Rating

High

b. Relevance of Design

As defined in the PAD, the project was conceived on the basis that “soil degradation, low water-use efficiency, weak infrastructure and institutions, and a lack of farmers’ incentives were the main factors impeding the productivity and sustainability of irrigated agriculture in the project area, and tend to reinforce each other” (PAD, Annex 1). The project design benefited from significant analysis of the relevant sector studies and consideration of important lessons learned from the World Bank’s experience in the I&D sector in Uzbekistan and other countries (Mexico, India, Kazakhstan, etc.). The two main operational components of the project were also well-conceived and defined with a focus on the technical intervention for I&D to reduce water logging and institutional interventions for strengthening of public institutions and private farmers’ organizations (water user groups or associations) involved in water management and utilization. Under Component 2, the project included provision of technical assistance (TA) for drafting a new Water Code and the legislation and regulations related to water user association establishment and operations, which are important for sustainable management of water in intensive irrigation systems. However this assistance was not eventually implemented by the project as UNDP is reported to have supported the effort - but opportunities to collaborate with UNDP in strengthening local institutions while maintaining the component within the main project may have been lost. At the appraisal stage, the identification of critical risks was comprehensive and included reasonable corresponding mitigation measures.

However, the objective of the project was complex encompassing different outcomes into one compound objective – (i) improving agricultural production in areas affected by water-logging, (ii) reducing damage to



housing and infrastructure from rising ground water levels and soil salinity. Achievement of project objectives was expected to be measured by the following key performance indicators: (a) the lowering of the ground water table, (b) an increase in crop yields, and (c) the reduction of land area under flooded settlements (PAD, paragraph 14) but the targets for two of these indicators were changed and two additional indicators were added later. The PAD contains a simplified and weak results framework (RF) presenting the main indicators selected for monitoring of outcomes for the different project components. Some of the project components were not measured (e.g. Outcomes from Component 2 – changes in the Institutional capacity including Water Users Associations). In addition, owing to the significant shortcomings in the results framework, many of the (intermediate) outcome indicators were modified or dropped as part of strengthening the results framework, but the underlying project logic and the causal chain linking the project's inputs and outputs to the outcome(s) that the project seeks to achieve were not developed in the RF. The intrinsic theory of change for the project as articulated in the PAD was to increase economic benefits through: (i) higher crop yields and increased cropping intensity resulting from better drainage, reduced waterlogging, an enhanced supply of irrigation water, and adoption of improved agronomic techniques and crop rotation; (ii) avoidance of a gradual loss of production resulting from the increased waterlogging and soil salinity; and (iii) mitigation of the extensive damage to housing and civil infrastructure and the cost of subsequent rehabilitation and repair that result from inundation and flooding.

Given the design problems, the project was formally restructured three times in 2015–16. The Level 2 restructurings were partly necessitated by the need to strengthen the weak M&E system and to address inconsistencies and discrepancies in the project's results framework. A final restructuring was approved in July 2016 to allow a five-month extension of the closing date for completion of planned activities. The ICR highlighted that the “large amount of planned civil works activities somewhat complicated implementation and caused delays although all project components were aligned to the PDO and addressed the key issue of water-logging” (ICR, paragraph 44).

Rating
Modest

4. Achievement of Objectives (Efficacy)

Objective 1 **Objective**

Increase agricultural production in areas affected by water-logging

Rationale

The project's PDO had two parts, namely “to improve agricultural production affected by water-logging, and to reduce damage to housing and infrastructure from rising ground water levels and salinity in the Project Districts”. For the assessment of the project's achievements, these two sub-objectives will be referred to as



"Objective 1" and "Objective 2".

Under the Rationale for Objective 1, we first assess the efficacy of the investments in terms of whether the outputs and targets were achieved. Second, the outcomes, summarized below, were gleaned from various parts of the ICR.

Outputs

(a) Improvement of irrigation network - Rehabilitation of inter-farm irrigation canals, Rehabilitation of on-farm irrigation canals and Drip irrigation installed.

- 17.3 km Concrete canals
- 41 Regulators and outlets
- 38 km of earth canals and concrete canals
- 4817 Regulators and outlets
- 303 Hydroposts
- 301.4 ha of drip irrigation equipment installed

(b) Improvement of surface draining network - Rehabilitation of drainage systems, Flushing of Surface Horizontal Drainage (SHD), and Rehabilitation of SHDs.

- 778.1 km of on-farm open horizontal drainages
- 226 on-farm collector structures
- 101.9 closed horizontal drainage
- 170 km inter-farm collectors (drainage systems)
- 65 km inter-district collectors (drainage systems)
- 25.2 km of intercepted drainages
- 100.17 km of flushing of surface horizontal drainages (SHDs)
- 151 SHDs rehabilitated

(c) Improvement of vertical drainage network and groundwater development and management in the field and in settlements

- 34 observation wells
- 1,414 pressure relief wells
- 242 Vertical drainage wells (VDWs)
- 6,000 ha of deep rippings (ploughings)
- 760 conjugation structures

(d) Institutional strengthening of public institutions

- Various drainage, farm and office equipment and software purchased for the BISA/ISA/HGAE (US\$1,067,903)
- Trainings in organizational, legal and technical issues delivered (total participants 1,141 – 90.1%)



participation

(e) Dissemination of modern agricultural and water management practices to members of the WCA and small-scale dekhan farms through provision of training and establishment and operation of field DPs

- 9 Demonstration plots established
- 200 Farmer field school trainings offered
- 723 people trained through farmer field schools

Data on the relevant PDO indicators and intermediate outcome indicators and the achievements relative to targets was not summarized or provided in any of the Annexes.

Outcomes

The project aimed to increase agricultural production in areas affected by water-logging mainly because the project districts suffered from water-logging and soil salinity which constrained agricultural production especially for the sensitive crops. Soil degradation, low water-use efficiency, over-irrigation, weak infrastructure and institutions, and lack of incentives were identified as the main factors reducing agricultural productivity and sustainability of irrigated agriculture. This outcome was captured only using one PDO indicator – increase in crop yields for major crops (baseline: cotton 2.4 tons per ha; cheat 3.5 tons per ha; vineyards 12.5 tons per ha; fruits at private (leasehold) farms 3.0 tons per ha; fruits on small-scale dekhan farms 6.0 tons per ha; vegetables 20.0 tons per ha). While reducing the production losses from water-logging and salinity is important, the increase in agricultural production by itself also does not translate to higher living conditions for farmers. Therefore, this Review will (following the lead of the ICR) assess the extent to which Objective 1 was achieved by examining results in terms of yield, production and net income changes.

(a) Crop yields:

The crop yield target was not revised during the restructuring in April 2015. The data on crop yield changes was summarized in the ICR Table 1. This however presents the yield and percentage changes relative to the baseline (Year 1 was assumed for the evaluation as 2011) without comparison with what crop yields would have looked like in the absence of the project. Except for cotton which has shown marginal changes relative to the target, the data shows that most of the crops including wheat, vineyards, fruits and vegetables have registered higher relative yields (compared to the baseline) at the time the project closed. These effects on crop yields were significantly dampened when one analyzes the net yield effect relative to the “control” (i.e., what would have happened without the project as summarized in Table 3.2 of Annex 3 of the ICR). For the purposes of this Review IEG has used the information in Table 3.2 in Annex of the ICR to undertake a difference-in-difference (DiD) or double difference analysis to estimate the net changes attributable to the project (see explanation of this analysis below under Table 3.2). The IEG computations (to estimate the DiD effect) show, for example, that for cotton there was clearly no impact from the project because the average yield in 2015 was the same without the project as with the project. For wheat even if yields increased compared to the baseline, wheat yields declined by 1.8% and 2.7% on leasehold and dekhan farms respectively based on the DiD analysis. Similarly maize yields increased by 7.3% on leasehold farms but declined by 2.9% on dekhan farms. On leasehold and dekhan farms rice yields improved by 41.4% and 10.5%. Vegetable yields declined on both leasehold and dekhan farms by 2.9% and 3.8% respectively,



orchard yields increased by 14.5% and 9.6%, but vineyards yields declined 9.3% on leasehold farms but increased by 4.3% on dekhan farms. The DiD calculations for yields of fodder crops and legumes showed that there was no difference between the changes in yields with the project compared with the changes in yields without the project (not included in the table). Overall the results of the DiD calculations show zero or negative net yield increases for important crops such as cotton, wheat and vegetables on both leasehold and dekhan farms, as well as negative net yield changes for vineyards on leasehold farms. Overall, this Review concludes that, based on information in the ICR and review of additional material provided based on IEG request, there was evidence to show a modest net change in crop yields with the project compared to the estimated change without the project.

Relative Changes in Crop Productivity in Project Districts by Type of Farm Management

(tons per ha - based on ICR, Annex 3, Table 3)

	<u>Leasehold Farms</u>				<u>Dekhan Farms</u>			
	Base Year 2011	Future Without Project (2015)	Future With Project (2015)	% change (DiD effect: IEG computation)	Base Year 2011	Future Without Project (2015)	Future With Project (2015)	% change (DiD effect: IEG computation)
Cotton	2.9	2.7	2.7	0.0	7.3	7.7	7.5	-2.7
Wheat	5.6	5.9	5.8	-1.8	7	8.2	8	-2.9
Maize	5.5	6.3	6.7	7.3	3.8	3.5	3.9	10.5
Rice	2.9	1.6	2.8	41.4	25.7	25.9	27.8	7.4
Potatoes	15.3	32	33.4	9.2	29.2	33.7	32.6	-3.8
Vegetables	28	36.2	35.4	-2.9	28.3	21.3	19.2	-7.4
Melons	13.8	27.8	24.4	-24.6	14.6	22.8	24.2	9.6
Perennial Crops:					14.1	22.9	23.5	4.3
Orchards	5.5	7.1	7.9	14.5				
Vineyards	11.8	11.2	10.1	-9.3				

Note: IEG computation is based on the Difference-in-Difference (DiD) approach (A-B): A = percent change of the future with the project (FWP) relative to baseline; B = the percent change for the future without the project (FWOP) relative to baseline. *In assessing improvements over time, one compares the changes in outcomes over time between a population that is enrolled in a program (the participant group) and a population that is not (the comparison group). The first difference in the before-and-after outcomes for the enrolled group controls for factors that are constant over time in that group. The second difference captures the factors that vary over time and affect the outcome by comparing the changes in outcomes for a group that did not enroll in the program but was exposed to the same set of environmental conditions over the time the program was implemented. The DiD effect is estimated simply by subtracting the second difference from the first difference to clean the source of bias under uncontrolled conditions. All the DiD computations of the net effect of the project in this ICR Review are based on this approach. This approach provides a more accurate assessment of the gains in productivity than indicated in paragraph 5 of Annex 3 in the ICR.*

(b) Crop production:



Increase in production is a function of increase in crop yields and area expansion. The ICR noted an increase in the share of cropped area for secondary and perennial crops in the future with the project (FWP) case and, hence, increased cropping intensity. The production data for both leasehold and dekhana farms are summarized in Table 3.3 (ICR, Annex 3). The data corresponded with increase in total production in the project districts, which amounted to **179,192 tons** (or 46% increase relative to the baseline). However, the change in total production which adds up physical outputs of different crops with varying economic value is not so relevant and the changes in the outputs for each of the crops should be looked at separately. Based on IEG calculations, the net effect of the project on crop production relative to what would have happened without the project (using the DiD approach) is negative for maize, rice, potatoes, melons, legumes, fodder and orchards. Although aggregate production has increased relative to the baseline, production has increased faster under the without project situation. If we use the aggregate measure, production showed a 0.4% fall relative to what would have happened under the situation without the project (Table 3.3 Annex 3).

This Review concluded that the overall net crop production increase attributable to the project was negligible although the effect on the major crops (cotton and wheat) was modest.

Total Annual Crop Production in the Project Districts and Outside the Project Districts

(tons - based on ICR, Annex 3, Table 3.3)

	Base Year 2011	Future Without Project (2015)	Future With Project (2015)	FWP Increment over Base Year (tons)	FWP Increment over Base Year (%)	% change (DiD effect: IEG computation)
Cotton	46,777	35,529	42,719	-4,059	-9	15.4
Wheat	110,735	101,795	112,771	2,036	2	9.9
Maize	2,025	5,953	5,197	3,172	157	-37.3
Rice	184	612	263	78	42	-189.7
Potatoes	15,266	47,296	40,289	25,022	164	-45.9
Vegetables	134,471	151,022	208,741	74,270	55	42.9
Melons	4,688	13,290	10,157	5,469	117	-66.8
Fodder	26,607	140,542	67,737	41,130	155	-273.6
Oilseed	—	0	360	353	353	
Legumes	36	511	432	397	110.7	-219.4
Orchards	34,535	57,360	55,252	20,717	60	-6.1
Vineyards	14,568	16,771	25,175	10,607	73	57.7
Total	389,892	570,681	569,093	179,192	46	-0.4

Net income: The Bank's project team advised IEG that net income was defined as farm net income from crops grown net of the standard variable costs of farming (fertilizer, machinery, labor, seeds etc.). The ICR noted that the increase in production led to greater net farm income, which in the FWP case for dekhana farms is shown as 21.3% higher than in the FWOP case (ICR Table 3.4 Annex 3). As the ICR also noted, the important comparison is what had happened with and without the project. While the data were unclear regarding the assumptions under the different fee structures (I&D vs. O&M), using the data provided the IEG calculations (using the DiD approach) show that the net farm income relative to the "without project" case has increased by about 31% for dekhana farms, but marginally for Leasehold Farms with (3%-5%) and



without (-2% to 1.2%) orchards. The Bank's project team clarified that dekhan farms accounted for about 36% (10,000 ha) of the cultivated areas in the project districts, while leasehold farms account for 64% (18,000 ha). The average size of dekhan farms was 0.2 ha and of leasehold farms about 15 ha, indicating 50,000 dekhan and 1,200 leasehold farms in the target area. The impacts on leasehold farms are therefore most important in terms of increasing crop production and the yield change gains remained lowest for this group of farmers.

The ICR also indicated that the direct project beneficiaries, including female beneficiaries (new indicator) was 583,300 (49% female) against the target of 535,000 (30% female), suggesting significant coverage but the net income effect was moderate.

This Review concluded that the overall net income effect of the project was modest both before and after the first Level 2 restructuring.

Net Farm Crop Income per Household

(UZS, thousands in 2011 prices - based on ICR, Annex 3, Table 3.4)

	Base Year 2011	Future (2015) With Project		FWOP (2015)	% increase FWP vs. FWOP	IEG computation	
		No I&D Fees	O&M Fees only			% Impact No I&D Fees	% impact O&M Fees only
Leasehold farm (with orchard)	53,412	84,870	83,751	81,963	3.5	5.4	3.3
Leasehold farm (without orchard)	34,834	46,567	45,448	46,161	0.9	1.2	-2.0
Dekhan farm	2,135	3,823	3,818	3,152	21.3	31.4	31.2

Summary: The data presented do not provide plausible evidence that crop productivity, production and net income have been significantly higher than would have been the case without the project. In addition, the ICR indicated that cropping constitutes only about 10% of the household income in the project districts and "its impact on the overall household welfare is not that significant and demonstrable. The ICR also mentions positive non-income changes in terms of improvements in drinking water sources, and water-borne diseases and health, but data on such changes is not provided (paragraph 62).

Conclusion: Based on the analysis of data in the ICR the project had only a modest impact on crop yields, production and net farm income. Hence **the efficacy of Objective 1 is rated modest** in terms of the extent to which it achieved the original and revised outcome targets.

Rating
Modest



Objective 2

Objective

Reduce damage to housing and infrastructure from rising ground water levels and salinity in the Project Districts

Rationale

The reduction in the damage to housing and infrastructure is expected to result from several outcomes: (i) Decrease in groundwater level (GWL); (ii) Reduced flooding in settlement areas; and (iii) Decreased area with high ground water mineralization (GWM).

- **Decrease in groundwater level (GWL):** Under this PDO indicator and using the data provided the project has met most of its planned original and revised targets after the formal restructuring: virtually no areas with GWL of less than 1.0 m (original target was 0%, revised target was 0.1%); only 7.7 % of the area has a GWL between 1.0 m and 1.5 m (original target was 7.7% and revised target for PY7 7.0%); and 33.1% of the area has a GWL between 1.5 m and 2.0 m (original target was 33.1% and revised target for PY7 of 52.5%) (ICR, paragraph 51). This indicated **substantial** achievement under both targets.

- **Reduced flooding in settlement areas:** The ICR stated in Section F of the Data Sheet that 1,394 km of improved irrigation and drainage network was established leading to reduction of affected households from 67.4% (baseline in 2011) to 13.1% in 2016 (against the revised target of 0% and the original target of 6%). The achievement of the original target, while not met, was rated substantial. The revised target (established only about 18 months before the project closed) was missed by a wide margin and this achievement was rated modest.

- **Decreased area with high ground water mineralization (GWM):** For this new PDO indicator, the ICR identified the following achievements in Section F of the Data Sheet: non-saline - 41.5% of all area (relative to revised target of 42%); low saline - 57.7% of all area (revised target 57%); mid-saline - 0.7% of all area (revised target of 0.99%); high saline - 0.0% of all area (revised target of 0.01%). This indicated a substantial achievement based on the new indicator and its targets.

Summary. The achievements especially in terms of lowering house damage incidence and repair costs are substantial, even though these indicators were not included in the PDO indicators nor did the ICR provide a counterfactual analysis to establish the attribution of decreased flooding, groundwater levels and lower costs of repairing damage to houses due to water logging and salinity to the project investments.



Conclusion. Despite the absence of a counterfactual analysis the overall efficacy of Objective 2 is assessed to be Substantial based on the extent to which both the original and revised outcome targets were achieved.

Rating
Substantial

5. Efficiency

The project covers a total area of about 67,000 ha including 53,000 ha of gross irrigated area and 48,000 ha of net irrigated area in three districts (Raions) - Rishtan, Baghdad and Altyarik in the Ferghana Oblast. Although the PAD did not explicitly discuss a specific group of beneficiaries, the ICR indicated ordinary inhabitants of the three Raions covered by the project with a total population of about 583,300 people, as the main beneficiaries. The benefits were in terms of lower GWL, leading to better living conditions because of reduced damage from flooding; individual farmers benefiting from the improved soil conditions resulting in increased agricultural productivity. The ICR indicated that about 2,000 people (farmers, members of Water Consumer Associations (WCAs), government employees, etc.), benefited from the training sessions organized by the project. Public water management institutions, state water laboratories, and staff in the Hydrogeology and Amelioration Expedition (HGAE) also benefited from training sessions and equipment provided by the project (ICR, paragraph 13).

At appraisal, the project was estimated to have an overall economic internal rate of return (EIRR) of 29.3% with a net present value (NPV) of UZS 127.8 billion and a benefit-cost ratio of 2.5:1 (PAD, paragraph 17). These estimates assumed both higher crop yields and increased cropping intensity resulting from the better drainage as well as mitigation of the extensive damage to housing and infrastructure and the cost of subsequent rehabilitation and repair that result from inundation and flooding. At closing the ICR does not provide any details on how the benefits and costs were estimated (which benefits and costs were included or not included) but presents the project's financial internal rate of return (FIRR) estimated at 48.5% and the EIRR at 51.7% in the long run. Using 12% as the opportunity cost of capital, the project is reported to have produced high returns. This figure was, however, reduced to about 28% if all project benefits fell by 10% to 90% of the estimated values (indicating significant sensitivity to the estimated benefits). The Economic NPV is estimated at **UZS 444 billion** (almost four times the appraisal value) with the Benefit-Cost Ratio of 4.65:1 (ICR, paragraph 56).

Under the discussion of efficiency, the ICR also provided separate estimated values for the NPV. In paragraph 57, the ICR provided a higher estimate of UZS 451.5 billion for the NPV indicating that increased agricultural production, which included improved crop productivity and avoidance of a gradual loss of production due to high groundwater levels was estimated to account for 80 percent of the total project benefit. The benefit from reduced damage to housing and infrastructure was estimated at UZS 114.6 billion. Neither



assumptions nor the estimated flow of benefits and costs were provided in the ICR which was a shortcoming considering the significantly higher rate of return estimates compared to the estimates at appraisal.

The ICR was also expected to provide aspects of design and implementation that either contributed to or reduced efficiency – but no such information was provided other than indicating that “**administrative and operational cost of the project was mostly in line with the project design**” (ICR, paragraph 59) despite the delays in some project activities leading to an extension for 5 months. There was also no clear indication of the benefit components and the percentage of total project costs covered by the efficiency analyses and whether there are any differences in the computational approaches used between the analyses at appraisal and the final estimates. This would have been very useful for the evaluation given that the EIRR is reported to have increased from 29.3% at appraisal to 51.7% at closing. However, the project team provided, based on IEG request, additional clarifications on the economic analysis including a detailed Excel file presenting the estimation of the EIRR to complement data and information provided in the ICR.

Summary. The additional documentation provided by the project team clarified that the higher EIRR at closing compared to appraisal was mainly due to two reasons: (a) the lower total cost of the project which was estimated at 144 billion UZS (82 million USD) at appraisal but turned out to be around 94.7 billion UZS (49 million USD – official exchange rate); and (b) the inflation adjusted prices for agricultural commodities (using the GDP deflator) are higher since 2011 and the gross margins on most crops (especially those to which the producers have increasingly shifted, like vegetables and orchards) have increased significantly. It is indicated that the combination of lower costs and higher returns on crops led to an increase in the EIRR. Based on this information, **the Efficiency rating is increased to 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	✓	29.30	100.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	51.70	0 <input type="checkbox"/> Not Applicable

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

6. Outcome



The relevance of objectives and design were rated by this Review as, respectively high and modest. The efficacy of the Objective 1 (increase agricultural production in areas affected by water logging) was rated modest because of inadequate evidence that the project's achievements (measured in terms of improved yield and production of agricultural crops) in project districts were significantly better than in districts where the project had not been implemented. On the other hand the efficacy of Objective 2 (reduce damage to housing and infrastructure from rising ground water levels and salinity in project districts) was substantial because of the success of project investments aimed at achieving a decline in groundwater levels, reducing flooding in settlement areas, and lowering water mineralization which together resulted in substantially lower damage repair costs for housing and infrastructure in project districts. This Review's assessment of the efficacy the project's achievements is the same for the original and revised outcome targets. The project's efficiency was rated modest because of the lack of evidence in the ICR on the basis for the estimated economic rate of return at the project's close.

Conclusion: Overall the project's objectives and design were substantially relevant. The project's achievement of increasing agricultural production was modest but its achievement of reduced damage to housing and infrastructure as a result of reducing groundwater and salinity levels was substantial. Efficiency in the project's implementation was rated substantial. This Review assessed these ratings to be the same before and after the significant additions and changes to the indicators and targets at restructuring in April 2015 which was only 18 months before the project's final closing data. On the basis of these results, the Review concludes that the extent to which this project's objectives were achieved was moderately satisfactory.

a. Outcome Rating

Moderately Satisfactory

7. Rationale for Risk to Development Outcome Rating

According to the ICR, the main risk to continuity of this project's development outcome is the availability of funds to allow proper maintenance of the I&D systems and a power supply for the vertical drainage wells (ICR, paragraph 69). However, the ICR noted that this risk would be partly mitigated by the strong commitment of the central and local authorities to ensure smooth operations of water drainage and prevent water-logging from happening again, as well as ensuring additional power supply facilities that are already under construction in the project districts (ICR, paragraph 69). Nevertheless risk to irrigation efficiency could persist in future if water user associations (WUAs[JWVHP1] [BAS2]) and local institutions are not able to finance the maintenance of irrigation systems and regulate water use and prevent water-logging and the resultant salinization of soils

The ICR also noted that "in the long term the rise in agricultural productivity will strongly depend on Government policies in agriculture". It also observed that a follow-on operation in the Ferghana Valley should reduce the risks to this project's development outcomes because of these risks and reinforce agricultural and social benefits achieved during the implementation of the project (ICR, paragraph 69). The preparation of the Feasibility Study of the Ferghana Valley Water Resources Management Phase-II Project was completed as part



of Component 3 of this project's activities. This is expected to build on the progress made in the Phase-I project, expand to other areas of the FV, and focus more on productivity growth and rehabilitation of I&D systems. The institutional arrangements established for implementation of Phase-I will remain and the follow-on project will build on the existing systems.

a. Risk to Development Outcome Rating

Modest

8. Assessment of Bank Performance

a. Quality-at-Entry

The project's technical design was based on sound analysis of project models (PAD, paragraphs 19-21), the latest sector studies, consideration of important lessons learned from the World Bank's experience in the I&D sector in Uzbekistan and other countries (Mexico, India, Kazakhstan, and others), as well as from models used by other donors, including the European Union-UNDP Enhancement of Living Standards Program. An extensive two-phase process of social assessment and an environmental review were also conducted, helping to identify potential risks and challenges. The identification of critical components and risks was through a risk appraisal which included relevant mitigation measures. The project took three and half years to move from Concept Review to Appraisal. The ICR (paragraph 44) also highlighted that the "large amount of planned civil works activities somewhat complicated implementation and caused delays although all project components were aligned to the PDO and addressed the key issue of water-logging".

The PAD stated that a thorough economic and financial analysis (EFA) was undertaken to estimate an economic rate of return. The project was prepared in close collaboration with and participation of several Government agencies and civil society representing local communities affected by waterlogging and drainage issues. The implementation arrangements using a PIU, under MAWR, including fiduciary responsibilities and financial management (FM) and procurement were appropriate but the design overlooked the weak capacity of the Government to process procurement approvals. Within the MAWR, the Deputy Minister in charge of the irrigation sector acted as the Project Head and had overall responsibility for the project. A Project Steering Committee was also established for better coordination among different Government agencies and basin administrations entities. However, the project design lacked a strong M&E system which necessitated a Level 2 restructuring to address inconsistencies and discrepancies in the project's results framework (RF) and M&E system including changes in the outcome indicators or their targets.

There was no evidence in the ICR that the design of project monitoring arrangement and data collection instruments in the PAD were thoroughly discussed and planned which caused deficiencies in the collection and evaluation of data during implementation. For example, some indicators could not be measured and baseline/targets for others which were established in the PAD were not technically justified. The ICR noted that although the project design was "straightforward from an engineering perspective", some additional effort during preparation and baseline studies could have improved the M&E framework and made it unnecessary



to request for restructuring (ICR, paragraph 71).

This Review concludes that weakness at entry was the inadequate design of the M&E framework, which necessitated project restructuring but the changes were not formalized until very late in the implementation process. Hence restructuring failed to contribute to improved project performance.

Quality-at-Entry Rating

Moderately Satisfactory

b. Quality of supervision

The ICR (paragraph 72) noted that placement of the Task Team Leader (TTL) in the field was very beneficial and allowed quick visits to Government Agencies and project districts when needed, in addition to formal implementation support missions that were conducted semiannually. The PIU was appreciative of the available technical and fiduciary support from the TTL as well as the World Bank's Country Office, and the pro-active approach to problem solving. Aide Memoires were informative and supportive of PIU decision making. Supervision of safeguards issues was strong as well with the Environmental and Social Specialists reporting regularly on the progress and using ratings effectively to highlight outstanding issues.

A total of 14 implementation status and results reports (ISRs) were prepared during implementation of the project. Many of the ISR Development Objectives (DO) reports (except the first three which were Satisfactory) were Moderately Satisfactory while the Implementation Progress (IP) reports were mixed mainly ranging from Moderately Unsatisfactory to Moderately Satisfactory (and one Satisfactory). Turnover of TTLs does not seem to be much of a major problem as experienced TTLs changed only once during the long period between project appraisal and its closing date.

According to the ICR a comprehensive Mid Term Review (MTR) was carried out in November 2013 to help facilitate implementation by clearing the existing bottlenecks. The MTR mission extensively discussed the weaknesses in the project results monitoring framework and agreed on the action plan to rectify the problems. However, the ICR noted that the World Bank team did not follow up adequately "on some of the recommendations made during the MTR and subsequent missions, particularly with respect to revision of RF, which happened after significant delay, and the failing ICB contracts. The project team's recommendations to terminate those contracts were not fully utilized at subsequent meetings at different levels, including discussions on the country portfolio. As a result, the issue persisted for an extensive period" (paragraph 73). The ICR noted, however, that the delay in processing the first restructuring was caused by a late arrival of the formal request at the Bank because of lengthy procedures within the Government, which required approvals from all involved ministries and agencies.

Quality of Supervision Rating

Moderately Satisfactory

Overall Bank Performance Rating



Moderately Satisfactory

9. Assessment of Borrower Performance

a. Government Performance

The ICR noted that the project came about because of the strong Government interest in resolving water-logging issues in the region and improving living conditions for inhabitants. Government agencies and local authorities strongly supported the project and showed willingness to cooperate to achieve desired results. Strong Government support facilitated prompt clearances of the project's Financing Agreement and annual budgets as well as the successful completion of most of the project activities (ICR, paragraph 23). In addition, there was indication (where ?) that the GOU was committed to provide adequate budget for the maintenance of the I&D system that was rehabilitated under the project. However, some facilities like the vertical drainage wells (VDWs) required not only a maintenance budget but power supply for uninterrupted operations. The ICR also noted that at the time of the ICR mission, there was not enough power to keep all the VDWs operating continuously although local authorities assured the ICR mission that additional power supply facilities were under construction and power supply would not be a problem in future.

The ICR stated that the Government actively supported project implementation by various means, including administrative leverage. This was confirmed by eventual resolution of the customs clearance issues that delayed operations of some critical equipment under the major ICB-1 contract for major civil works. However, while lengthy procurement procedures of different agencies, particularly in MFERIT, delayed approval for the ICB-2 (rehabilitation of the on-farm irrigation network) and ICB-3 (rehabilitation of the inter-farm irrigation network) contracts substantially (6 months) they were ultimately approved but not fully implemented and completed by project closure and therefore reduced the project's output results. The ICR reported that the procedural complexities within the Government often led to protracted decisions on international procurement (ICR, paragraph 27 and 75). The ICR also adds that despite major delays in implementation of the ICB-2 and ICB-3 contracts, the GOU was not willing to terminate them mainly for reputational considerations (ICR, paragraph 28).

Government Performance Rating

Moderately Unsatisfactory

b. Implementing Agency Performance

The ICR asserts that both the PIU and the MAWR showed strong commitment toward achievement of the project results. They met regularly with the World Bank's project team, openly discussed project issues, and followed up on the agreed actions in line with their authority and competence. Performance of other agencies involved in project management including consulting companies for technical supervision and M&E was adequate as well. Nonetheless, even with a strong support from the Government, the project could not avoid significant delays in implementation. These delays were caused by a systemic reason that affected projects across the portfolio (ICR, paragraph 24). In addition, it was the long list of contracts that needed to be reviewed by the Ministry of Foreign Economic Relations, Investment, and Trade (MFERIT). Registrations of contracts by MFERIT were completed only after direct intervention by the Ministry of Economy (ME). Although the Country Partnership Strategy for FY2012–15 emphasized the need to work



closely with MFERIT and the ME to reduce contract clearance time, progress on resolving this issue is still limited (ICR, paragraph 24).

There were, however, shortcomings in the PIU performance related to recorded instances of noncompliance with environmental and social safeguards. Although environmental performance was rectified in due time, issues related to approval of the resettlement action plan (RAP) and delays in payments to the Project Affected Persons (PAPs) persisted for some time, causing the downgrade in relevant performance ratings. This was caused by lack of sufficient manpower to follow up on time on the RAP. On the other hand, fiduciary aspects of implementation are reported to have been well handled by the PIU.

Implementing Agency Performance Rating

Moderately Satisfactory

Overall Borrower Performance Rating

Moderately Satisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design

The ICR stated that the results framework (RF) and the M&E design were relatively simple and straightforward but that they were inadequate for the purpose (ICR, paragraph 32). The simplified M&E framework in the PAD was not able to identify the pertinent indicators for monitoring of outcomes under the compound objective – containing two partitioned objectives. Some of the project outcomes were not measured, especially those related to Component 2 such as changes in the institutional capacity including Water Users Associations. Some of the assumptions made during the project design, especially with regard to the indicators or baseline values for some of the key indicators (e.g. reduced flooded settlement areas), proved to be incorrect or were overtaken by farmers' own efforts, leading to important changes in the mode of measurement or monitoring process.

Owing to these significant shortcomings in the design of the M&E framework, many of the intermediate outcome and PDO indicators were substantially modified or dropped following the MTR and agreement on the need to strengthen the M&E framework. This led to important changes in the mode of measurement, changes in targets or dropping of some indicators altogether. These actions were formalized in April 2015 as part of the Level 2 restructuring. Yet shortcomings remained. For example, there was no PDO indicator to assess "reduction in damage to housing and infrastructure" (part of the PDO). The ICR also noted that the methodology for data collection was not clearly explained and numeric targets for some activities, notably length of canals to be rehabilitated, were not updated, making monitoring of results difficult during project implementation (paragraph 32). The methodology for determining the overall impacts of the project was not also clear although the M&E consultants conducted the baseline survey (considered as 2011) and the final data for 2015. The [JWVHP1] counterfactual outcomes for comparison were not clearly defined. Despite positive additional reported outcomes from the projects, the M&E framework also did not include indicators to capture the important environmental and health related impacts of the project.



b. M&E Implementation

The M&E for implementation of the project was outsourced to a consortium of local consulting companies with local and international experience (ICR, paragraph 33). This arrangement brought in additional expertise in data collection and analysis although the data for the counterfactual were not clearly established and the yield outcomes without the project were high for several of the crops.

The ICR indicates that a comprehensive Baseline Survey was conducted upon project launch and continuous efforts were made to keep monitoring results up to date (ICR, paragraph 33). The M&E consultants were also actively involved in the discussion and redesign of the RF and made suggestions to improve it. During the MTR revision of the methodology for monitoring of certain indicators, clarification of the definition of indicators, and adjustment of the baseline and target values were agreed. However, monitoring data were not gender disaggregated, although disaggregation was specifically introduced for some indicators during project restructuring. The ICR also notes that data related to wheat and cotton productivity (the mandatory and most important crops in the Ferghana Valley), both from official statistics and from farm household surveys, were questionable perhaps because of some incentive for farmers to understate productivity (ICR, paragraph 33) but it was unclear why the baseline and subsequent survey data collected by the M&E team was not used.

c. M&E Utilization

Information from the M&E system was used during MTR to inform proposals for restructuring the project and to enhance the results framework (RF), but its impact was diminished by the delayed formalization of the restructuring. The ICR indicated that monitoring data on effectiveness of training were utilized in identifying technologies that were more favored by farmers. Monitoring data also showed that the demand for drip irrigation equipment was lower than expected, but it is not clear how this subsequently influenced the organization of demonstration plots (DPs) and promotion of drip irrigation facilities. The M&E system also allowed collection of technical data related to water quantity and quality that can be used in designing future projects related to water management in the area (paragraph 34). Nevertheless, There was insufficient evidence in the ICR on how the M&E data and results were utilized in project management, sequencing of activities or decision-making and resource allocation as well as learning on what works and what does not work.

M&E Quality Rating

Modest

11. Other Issues

a. Safeguards



The project was assigned environmental Category B rating. The rehabilitation and modernization of the I&D systems were not expected to involve any significant or irreversible adverse environmental effects.

The project triggered three safeguards policies — Environmental Assessment (OP/BP 4.01), Involuntary Resettlement (OP/BP 4.12), and Projects in International Waterways (OP/BP 7.50). The latter was triggered mainly due to the project's location in Syr Darya River Basin, which Uzbekistan shares with its riparian neighbors. As part of the notification requirement under OP 7.50, the GOU informed the Governments of Kazakhstan, the Kyrgyz Republic, and Tajikistan. Upon receipt of positive responses from the Governments of Kazakhstan and Tajikistan and no response from the Kyrgyz Republic, this safeguard compliance was regarded as satisfactory. An Environmental Management Plan (EMP) which was developed in 2009 identified several areas of implementation: impact mitigation, environmental monitoring, and institutional strengthening. The ICR notes that the environmental safeguard compliance rating was downgraded during the MTR to Moderately Unsatisfactory due to serious shortcomings in the implementation of the EMP, particularly in relation to the mitigation measures to be undertaken on construction sites. The rating was upgraded later to Moderately Satisfactory after the problem was fixed and it was maintained at this level until the closing date of the project. The ICR notes that the project was implemented in compliance with the World Bank and national environmental assessment guidelines (ICR, paragraph 36).

The Involuntary Resettlement safeguard was triggered as some I&D infrastructure required permanent or temporary acquisition of private farmland and removal of trees planted along roadways, canals, collector drains, and so on. A Resettlement Action Plan (RAP) was accordingly prepared before project appraisal (disclosed in May 2009). However, the ICR noted that during the project implementation, it became apparent that more resettlement-related impacts should be expected. But the initial RAP covered 37 farmers only although 338 farmers were affected by the project activities and land acquisition took place without the RAP being updated, constituting noncompliance with OP 4.12, leading to a downgrade in the safeguards compliance rating. The rating was subsequently upgraded when an updated RAP was developed. A project-level Grievance Redress Mechanism was also implemented. The ICR also noted that compensation payments to farmers were paid with delay after land acquisition and/or civil works started. This were later rectified and all outstanding payments were made before project closure (ICR, paragraph 37).

b. Fiduciary Compliance

Procurement performance under the project was considered Moderately Satisfactory most of the time. Although the procurement capacity of the Project Unit was Satisfactory, processing of procurement packages experienced delays due to external factors such as long registration by MFERIT. Despite the delays, it seems that most of the procedures under the Procurement Plan were satisfactorily completed. The filing system was adequate, and no major issues were noted (ICR, paragraph 39).

The Financial Management (FM) arrangements under the project (e.g. accounting, budgeting and planning, reporting, internal controls, external audits, funds flow, and organization and staffing) were considered Satisfactory and acceptable to the World Bank. The internal control system had been assessed as capable of



providing timely information and reporting under the project. Audit reports were reported to have been received as planned with unqualified opinions on the project financial statements (ICR, paragraph 40).

c. Unintended impacts (Positive or Negative)

The following un-intended positive benefits were gleaned from the ICR.

- **Positive impact on public health.** Comparing results of the Baseline Survey of 2011 with the survey done at the end of the project. The most recent survey demonstrated the reduction of the level of waterborne diseases since 2011, hepatitis decreased from 12.6 percent to 1.5 percent (ICR, paragraph 65).
- **Tangible environmental benefits.** It was noted that the total area affected by pests and treated by pesticides has been reduced by half since 2011. The pest management practices and introduction of integrated pest management principles has improved during the project implementation period (ICR, paragraph 66).
- **Improvement in living conditions.** This is demonstrated by the increase in price of land and houses in the project districts. Many people who seemed to have left the area earlier started to return and household gardens showed better yields because of improved soil conditions, contributing to the increase of land price. Some irrigation outlets that were rehabilitated by the project are near communities providing an excellent recreation facility for children, especially in the hot summer days (paragraph 67).
- **Learning and business opportunities** - The project provided to local consulting companies and suppliers that gained by participating in an international project which allowed them to enhance their capacity and expand their business (ICR, paragraph 13).

d. Other

There were important changes in the resettlement impact, given that 467 farmers were affected by the end of the project against only 37 project-affected persons (PAPs) that were identified initially. But it is reported that all outstanding payments were paid for this program before project closure.

12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	---
Risk to Development Outcome	Modest	Modest	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---



Borrower Performance	Moderately Satisfactory	Moderately Satisfactory	---
Quality of ICR		Modest	---

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 ICR included five lessons, but most of them were concerned with narrow operational issues faced by this project. Those lessons with broader application beyond this project are listed below with some editing.

For greater effectiveness of the M&E framework for project implementation, the overall M&E system needs to be firmly established and tested before project effectiveness or within the first year of the project. In the FV case, the deficiencies in the M&E design led to the inconsistency in the methodology for monitoring certain indicators that required restructuring. The upsides and downsides of outsourcing the M&E function may also vary according to local context

The administrative complexities in implementation can severely hamper progress (including excessive delays in contacting and procurement) and undermine the benefits from restructuring. In the specific case of this project, while the mid-term review (MTR) was undertaken in November 2013, the requested formal restructuring to improve the M&E framework could only be effected in April 2015, quite late in the process for a project that closed in Dec 2016, after a five-month extension from its initial plan.

Projects that require large-scale infrastructure works and importation of heavy equipment or international competitive bidding require careful design of contracting arrangements considering the laws of the country and in close coordination with local authorities for smooth execution. There were serious performance issues in the ICB-2 and ICB-3 contracts which highlighted the need for better contract management for increased efficiency and effectiveness and compliance with relevant Bank policies. In addition, progress in importing heavy equipment was hampered by the need to get clearance by MFERIT and a long customs clearance which was only resolved after more than half-a-year delay when the GOU intervened to resolve the matter for importation of the heavy machinery critical for the large-scale infrastructure work.

Increased awareness and demonstration by itself will not necessarily enhance introduction of complex technologies which require broad program support. While the Demonstration Plots (DPs) showed positive results for introduction of drip irrigation, deep ripping, and other innovative demo activities, farmers were cautious to immediately adopt new practices such as drip irrigation because of the high associated cost and their inability to diversify production, given other limiting factors (policy and institutional framework such as mandatory state orders for some crops). Better policies, technical (e.g. maintenance of drip systems) and financial support (including access to long term lending) can facilitate and enhance uptake.

In addition to engineering solutions, development of sustainable water and irrigation management



systems for addressing associated land quality and drainage problems will require better institutional arrangement including establishment and empowerment of local water user associations. This project under its second component aimed to provide support for institutional strengthening of public institutions and private farmers' organizations involved in water management and utilization. Institutional issues (including structural, legal and organizational) related to the functioning of the Water Users Associations (WUAs) were not however directly addressed. The planned technical assistance for drafting a new Water Code and the legislation and regulations related to WUA establishment and operations, was not financed by the project as this was supported through UNDP. Once the legislation process is completed, the proposed Phase II project can benefit from greater attention to the implementation of this new code.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The ICR provides sound coverage of the safeguards issues including fiduciary compliance. Gender issues are also mentioned but, despite the introduction of improved indicators at restructuring, lack of disaggregated monitoring of indicators and data collection prevented the ICR from generating useful insights. The weakest part of the ICR was in its presentation of the data needed for assessing efficacy and efficiency. Whereas the project attempted to apply a split evaluation with limited data, the narrow presentation of the project's outcomes, especially in relation to what would have happened without the project, made it difficult to establish plausible attribution of the outcomes to the project's inputs and outputs. Other than presenting the outputs in Annex 2, the evidence justifying the achievement of the key PDO indicators and intermediate outcome indicators were not provided in sufficient detail. The economic analysis presented in Annex 3 was sketchy and lacking explanatory details on the assumptions, the methods used, and the key variables included in the analysis to demonstrate the overall efficiency of the project.

a. Quality of ICR Rating

Modest