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IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-44330 IDA-51520)

ON A

CREDIT

IN THE AMOUNT OF SDR 78.30 MILLION
(US\$107.96 MILLION EQUIVALENT)

TO THE
REPUBLIC OF UZBEKISTAN

FOR THE

RURAL ENTERPRISE SUPPORT PROJECT
PHASE II

June 27, 2017

Agriculture Global Practice
Central Asia Country Unit
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 30, 2017)

Currency Unit = Uzbekistan Soum (UZS)
UZS 3,830 = US\$1
US\$0.261 = UZS1,000

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AIS	Administration of Irrigation Systems
BAIS	Basin Administration of Irrigation Systems
CAS	Country Assistance Strategy
CPF	Country Partnership Framework
EMF	Environment Management Framework
FM	Financial Management
FFS	Farmer Field School
GoU	Government of Uzbekistan
GRM	Grievance Redress Mechanism
HDP	Horticulture Development Project
I&D	Irrigation and Drainage
IBRD	International Bank for Reconstruction and Development
ICR	Implementation and Completion Results Report
IDA	International Development Association
IFRs	Interim un-Audited Financial Reports
ILO	International Labor Organization
ISF	Irrigation Service Fee
MAWR	Ministry of Agriculture and Water Resources
M&E	Monitoring and Evaluation
NGO	Non-governmental Organization
O&M	Operation and Management
OFP	Operational and Financial Management Plan
PAD	Project Appraisal Document
PFI	Participating Financial Institutions
PDO	Project Development Objective
PIP	Project Implementation Plan
RESP	Rural Enterprise Support Project
RRA	Rural Restructuring Agency

RTAS	Rural Training and Advisory Services
SDC	Swiss Agency for Development and Cooperation
TA	Technical Assistance
TIIM	Tashkent Institute of Irrigation Management
TPM	Third Party Monitoring
WCA	Water Consumer Associations
WSU	WUA Support Unit
WUA	Water Users Association

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UZBEKISTAN
Rural Enterprise Support Project Phase II

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UZBEKISTAN
Rural Enterprise Support Project Phase II

A. Basic Information			
Country:	Uzbekistan	Project Name:	Rural Enterprise Support Project Phase II
Project ID:	P109126	L/C/TF Number(s):	IDA-44330, IDA-51520
ICR Date:	06/29/2017	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	REPUBLIC OF UZBEKISTAN
Original Total Commitment:	XDR 41.30M	Disbursed Amount:	XDR 65.38M
Revised Amount:	XDR 67.70M		
Environmental Category: B			
Implementing Agencies: Rural Restructuring Agency under Ministry of Agriculture and Water Resources			
Co-financiers and Other External Partners: Swiss Agency for Cooperation and Development (SDC) (Parallel Financing)			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	12/12/2007	Effectiveness:	12/30/2008	12/30/2008
Appraisal:	04/21/2008	Restructuring(s):		01/19/2011 03/19/2012 09/11/2012 07/25/2014
Approval:	06/12/2008	Mid-term Review:	12/05/2011	12/02/2011
		Closing:	03/31/2015	12/31/2016

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	Moderate
Bank Performance:	Moderately Satisfactory

Borrower Performance:	Moderately Satisfactory
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C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Moderately Satisfactory	Overall Borrower Performance:	Moderately Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	Yes	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Moderately Satisfactory		

D. Sector and Theme Codes		
	Original	Actual
Major Sector/Sector		
Agriculture, Fishing and Forestry		
Other Agriculture, Fishing and Forestry	25	25
Irrigation and Drainage	42	42
Agricultural Extension, Research, and Other Support Activities	2	2
Public Administration		
Central Government (Central Agencies)	6	6
Industry, Trade and Services		
Agricultural markets, commercialization and agri-business	25	25
Major Theme/Theme/Sub Theme		
Finance		
Finance for Development	9	9
Agriculture Finance	9	9
Financial Infrastructure and Access	9	9

MSME Finance	9	9
Private Sector Development		
Enterprise Development	9	9
MSME Development	9	9
Urban and Rural Development		
Rural Development	25	25
Rural Infrastructure and service delivery	15	15
Rural Markets	6	6
E. Bank Staff		
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F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

The project development objective was to increase the productivity and financial and environmental sustainability of agriculture and the profitability of agribusiness in the project area. The project would build on the experience of the closing RESP and scale it up to a larger area. This would be achieved through the provision of financial and capacity building support to farmers and agribusinesses in seven regions and improved irrigation service delivery through rehabilitation of I&D infrastructure and strengthening of WUAs in seven districts within these seven regions.

Revised Project Development Objectives (as approved by original approving authority)

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Overall farmer productivity and income in project regions have increased			
Value quantitative or	0	NA	20%	+33%

Qualitative)				
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	<p>The project measured average increase in yields per ha for nine key crops in the seven project districts with irrigation and drainage (I&D) interventions to demonstrate increased farmer productivity. The M&E data indicates that the average increase in yields per hectare was approximately +33 percent. However, based on the information provided in the end-of-project impact assessment, the weighted average increase is approximately 12.0 percent across the seven project districts.</p> <p>The indicator on increased incomes was added at the time of the Additional Financing (AF). However, the project did not track this indicator during implementation of the AF as it was found that beneficiaries were unwilling to share such data. The impact assessment of 70 sub-loans undertaken during preparation of the AF assessed that the average increase in household incomes among the 70 sub-loans recipients was 151.0 percent.</p>			
Indicator 2 :	Farmer access to information about and demonstrations of environmentally sustainable practices improved			
Value quantitative or Qualitative)	0	NA	52,000	61,246
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project value by 17.7 percent.			
Indicator 3 :	Growth in overall agricultural portfolio of the commercial banks at least 10 percent per year during the project period			
Value quantitative or Qualitative)	0	NA	40%	57%
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	<p>Target achieved exceeded end-of-project target by 42.5 percent. By project end 57 percent of the participating commercial banks had increased their agricultural portfolio by at least 10 percent.</p> <p>This indicator was included to measure improvements in farmers' and agribusinesses' access to financing and thereby the PDO outcome related to financial sustainability.</p>			
Indicator 4 :	Irrigated areas with adequate water supply and drainage in the project districts			
Value quantitative or Qualitative)	0	NA	65%	214%

Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 229 percent Baseline - 95,500 ha Actual improved area: 204,345 ha, which include – RESP-II IDA Support: 103,730 ha; Swiss Agency for Development Cooperation (SDC) Support: 26,351 ha; Ameliorative Irrigation Improvement Fund (government contribution): 74,264 ha			
Indicator 5 :	Project beneficiaries			
Value quantitative or Qualitative)	0	NA	20,000	94,629
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 373 percent. The indicator was added at the time of processing the AF as a core indicator.			
Indicator 6 :	Of which female (beneficiaries)			
Value quantitative or Qualitative)	0	NA	9,600	10,284
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 7.0 percent. Indicator was added at the time of processing the AF as a core indicator.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Loans provided by all PFIs			
Value (quantitative or Qualitative)	0	800	600	570
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	While the Credit Line was fully disbursed, the number of sub-loans provided by project-end was less than that envisaged at approval. This was because the size of the sub-loans was increased in response to the increase in average farm size from 20 ha to 100 ha under the government's farm reorganization program during project implementation.			
Indicator 2 :	Jobs created for Men			

Value (quantitative or Qualitative)	0	NA	1,170	1,860
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved and exceeded by 59 percent. Indicator was added when processing AF to better capture project impact on male beneficiaries.			
Indicator 3 :	Jobs created for Women			
Value (quantitative or Qualitative)	0	390		520
Date achieved	05/08/2008	12/31/2016	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 33.0 percent. Indicator was added when processing AF to better capture project impact on women beneficiaries.			
Indicator 4 :	Number of PFI staff trained			
Value (quantitative or Qualitative)	0	NA	200	573
Date achieved	05/08/2008	05/08/2008	12/31/2016	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 186.5 percent. Relevant PFI staff were trained in screening business plans and credit applications as well as monitoring of sub-project implementation.			
Indicator 5 :	Area of land with adequate irrigation water supply			
Value (quantitative or Qualitative)	74,000	165,000	165,000	187,471
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 13.6 percent. RESP II: 87,120 ha SDC: 26,351 ha			
Indicator 6 :	Area of land with adequate drainage			
Value (quantitative or Qualitative)	21,500	105,000	105,000	112,374
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved and exceeded end-of-project target by 7.0 percent. RESP-II: 16,610 ha			

	Ameliorative Irrigation Improvement Fund (government contribution):74,264 ha			
Indicator 7 :	Amount of maintenance conducted by WUAs			
Value (quantitative or Qualitative)	34%	75%	60%	87%
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 45 percent, i.e. with the provision of small maintenance equipment under the project, WUAs were able to undertake 87 percent of the maintenance needs of their I&D infrastructure compared to 34 percent at approval. The original target was reduced as the number of WUAs to be supported was reduced. This is because they were reorganized from administrative boundaries to canal-level boundaries during project implementation which reduced the overall number of WUAs.			
Indicator 8 :	Water users satisfied with WUA performance			
Value (quantitative or Qualitative)	0	NA	80%	82%
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 2.5 percent.			
Indicator 9 :	Trainings provided by WSU			
Value (quantitative or Qualitative)	0	65	40	1,472
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved and exceeded by 3,580.0 percent. The end-of-project target was set at an exceptionally low number given the importance of this activity. Also, the indicator is incorrectly worded. The indicator seeks to measure the number of trainings provided <u>to</u> WUAs and farmers in the I&D districts. The training was provided by SDC as follows: No. of training sessions for WUAs: 288 No. of trainings through Farmer Field Schools (FFS): 1,184			
Indicator 10 :	Total Farmers trained			
Value (quantitative or Qualitative)	0	83,720	61,000	61,426

Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 0.70 percent. (This is repetitive of PDO-level indicator 2 and should have been dropped at the time of project restructuring). This refers only to farmers under Component 3.			
Indicator 11 :	Total Farmers trained (women)			
Value (quantitative or Qualitative)	0	NA	9,150	9,185
Date achieved	05/08/2008	05/08/2008	06/11/2012	21/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 0.38 percent.			
Indicator 12 :	Number of workshops			
Value (quantitative or Qualitative)	0	2,093	884	938
Date achieved	05/08/2008	05/08/2008	06/11/2008	12/31/2016
Comments (incl. % achievement)	Target achieved exceeded end-of-project target by 6.10 percent. This includes only those workshops provided under Component 3 – Rural Training and Advisory Services. The target was lowered as a result of increase in average farm size which resulted in the reduction in the number of farmers country-wide.			
Indicator 13 :	Farmers satisfied with training			
Value (quantitative or Qualitative)	0	NA	90%	100%
Date achieved	05/08/2008	05/08/2008	06/11/2012	12/31/2016
Comments (incl. % achievement)	Satisfactory: 13.10 percent Good: 35.70 percent Very Good: 51.20 percent			

G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	12/07/2008	Satisfactory	Satisfactory	0.00
2	09/03/2009	Satisfactory	Satisfactory	2.00
3	03/31/2010	Satisfactory	Satisfactory	10.37
4	06/29/2010	Moderately Satisfactory	Moderately Satisfactory	10.37
5	03/02/2011	Moderately Satisfactory	Moderately Satisfactory	19.87
6	10/07/2011	Satisfactory	Satisfactory	27.20

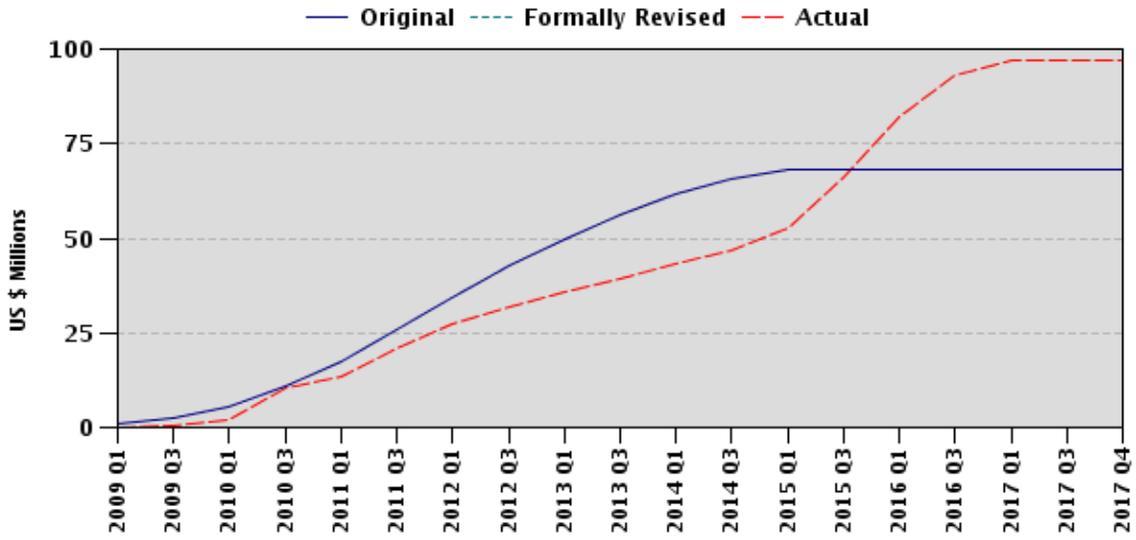
7	05/13/2012	Satisfactory	Satisfactory	31.74
8	12/07/2012	Satisfactory	Moderately Satisfactory	38.07
9	06/28/2013	Moderately Satisfactory	Moderately Satisfactory	41.77
10	01/04/2014	Moderately Unsatisfactory	Moderately Unsatisfactory	45.71
11	07/09/2014	Moderately Satisfactory	Moderately Satisfactory	50.56
12	12/14/2014	Moderately Satisfactory	Moderately Satisfactory	57.49
13	06/19/2015	Moderately Satisfactory	Moderately Satisfactory	72.69
14	12/14/2015	Moderately Satisfactory	Moderately Satisfactory	89.12
15	06/23/2016	Moderately Satisfactory	Moderately Satisfactory	95.58
16	12/23/2016	Moderately Satisfactory	Moderately Satisfactory	97.12

H. Restructuring (if any)

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
01/19/2011	N	MS	MS	16.56	Reallocation of US\$ 227,549 from Category (6) “Unallocated” to Category (3) “Consultants’ services, training and audit” due to higher than estimated contract value for developing detailed engineering design for the rehabilitation works.
03/19/2012	N	S	S	31.74	(i) Reallocation of US\$5.0M equivalent within Category (4) from the sub-category “(b) Micro-sub-loans under Part A.1” to the sub-category “(a) Investment and working capital sub-loans and lease financing under Part A.1”; (ii) dropping micro-sub-loan related indicators in the RF.
09/11/2012	N	S	S	35.34	Additional IDA financing (scale-up); (ii) change to RF; (iii) expansion to Jizzakh region; and (iv) extension of closing date.
07/25/2014	N	MS	MS	50.56	(i) Re-allocation of the original credit across disbursement categories, and (ii) revised component costs to reflect exchange rate fluctuations and

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
					additional project management costs.

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1. **During the late 1990s-early 2000s, the Government of Uzbekistan (GoU) launched an ambitious program of agricultural reforms with the goal of reducing public sector domination and encouraging market-driven, private-sector led growth in the agricultural sector.** Several policy reforms were instituted including, *inter alia*: (i) the restructuring of farms, with land passing from cooperative use to a new class of private farmers; (ii) limiting state planning of agricultural produce to only cotton and wheat and significantly increasing state procurement prices for both these crops; (iii) reducing state subsidies for inputs to encourage increased farmer access to private-sector supplied inputs as well as service providers; and (iv) shifting the provision of seasonal finance from state entities to commercial banks on more commercial principles.

2. **The impact of the policy reforms created major challenges in the agricultural sector.** The farm reorganization process gave rise to a new class of private farmers that lacked the management skills necessary to operate their farms and had little experience with obtaining financing from the commercial banking sector. Although demand for credit rose, provision of adequate financial services to the general agri-business sector remained constrained due to the lack of collateral; limited capacity of banks to assess agricultural risk; low capacity of potential recipients to prepare business plans; and the lack of long-term funding sources. On the irrigation and drainage (I&D) front, the on-farm I&D operation and maintenance was now the responsibility of the newly privatized farmers that had limited experience with I&D operation and maintenance (O&M). Moreover, much of the on-farm I&D infrastructure was over 30 years old, and suffered from a lack of investment and maintenance over the past decade. This had led to serious deterioration of the I&D systems, resulting in huge water losses, widespread water and soil salinization, loss of once-productive agricultural lands and declining crop yields and farmer incomes.

3. **The Bank-financed Rural Enterprise Support Project (RESP), implemented from 2002-2008, had successfully addressed some of these challenges and provided a strong rationale for continued Bank support in the sector.** RESP, a US\$34.90 million credit had been designed as a pilot activity to support the farming community in five districts of Uzbekistan with the objectives of: (i) increasing profitability and productivity in the agricultural sector; (ii) supporting the emergence of private sector initiatives; and (iii) ensuring sustainability of the agricultural sector through rehabilitation of irrigation and drainage (I&D) systems and improved farm management. The project sought to achieve these objectives through the following components: (i) Rural Business Advisory Services; (ii) Rehabilitation of I&D Systems; (iii) Rural Finance; and (iv) Credits for Agro-Service Enterprises. It had been envisaged during RESP preparation that if project implementation demonstrated positive results, it would be followed by a second phase of Bank support to improve productivity and profitability in the agricultural sector through continued support to the new class of private farmers. Thus upon RESP's successful closing, the GoU requested Bank's assistance for scaling up the achievements of RESP to seven regions of the country

as well as for addressing challenges of financial and environmental sustainability in the agricultural sector.

4. **Additionally, in 2007, the GoU developed the Welfare Improvement Strategy (WIS) 2008-2010 for, inter alia, improving the living standards of the country's population and reducing rural poverty which formed the basis of the World Bank Country Assistance Strategy FY08-11.** The WIS noted that while the impact of overall economic growth on improving livelihoods had been positive over the past few years with poverty decreasing from 27.50 percent in 2001 to 25.80 in 2005, the main impacts had been achieved only in urban areas. In rural areas, where most of the country's population resided, poverty reduction was proceeding at a much slower pace. In this context, the Country Assistance Strategy (CAS) FY08-FY11 was designed to support the implementation of the WIS, under which Pillar 2 focused on promoting rural development and improving water resource management, irrigation and drainage. RESP II activities were therefore designed to fit within the framework of the WIS and CAS pillar 2 that would help to unleash new opportunities for productivity growth in Uzbekistan's rural economy.

1.2 Original Project Development Objectives (PDO) and Key Indicators

5. The project development objective (PDO) was to increase the productivity and financial and environmental sustainability of agriculture and the profitability of agribusiness in the project area (as indicated in the Financing Agreement).

6. Key outcome indicators at appraisal included:

- Farmers' overall productivity and income in project regions will have increased
- Farmers' and agribusinesses' access to information about and demonstrations of environmentally sustainable practices improved; 10 percent of farmers in the project area who benefit from the Rural Training and Advisory Services (RTAS) activities will have begun to adopt these practices by end of project.
- Farmers' and agribusinesses' access to financial services improved: growth in overall agricultural portfolio of the commercial banks by at least 10 percent per year during the project period
- Microfinance institutions' outreach improved : the aggregate agricultural lending by microfinance institutions increased by 10 percent during the project period
- Irrigated areas with adequate water supply and drainage in the project districts will have increased
- Amount of maintenance work undertaken by the Water Users Associations (WUAs) in the project districts will have increased

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

7. There were no changes to the PDO. However, the Results Framework (RF) was modified at the time of preparation of the Additional Financing (AF). The indicators were revised as follows:

- The target number of all loans/leases envisaged by the end of the project was reduced from 800 to 600. This was due to: (i) a larger-than-expected average loan size under the original RESP II credit line. This was due to the increase in average farm size during project from 20 ha to 100 ha under the GoU’s ongoing farm reorganization program; and (ii) the expectation of a further increase in average loan size as the maximum loan size;
- Indicators related to the provision of micro-sub-loans were dropped as support for this activity was discontinued under the project;
- The target for the intermediate outcome indicator for number of farmers to be trained under the RTAS component was lowered from 83,720 to 61,000 as a result of increase in average farm size which resulted in the reduction in the number of farmers country-wide. In this respect, the number of workshops for farmers was also reduced from 2,093 to 884;
- The outcome indicator, “Amount of maintenance work undertaken by WUAs in the project districts” was dropped as this was realized to be duplicative in the RF and had already been included as an intermediate result indicator;
- The end-target for intermediate indicator, “Amount of maintenance conducted by WUAs,” was reduced from 75 to 60 percent as the project WUAs were newly established from old administrative boundaries to new hydrographic/canal level boundaries. The baseline was correspondingly adjusted to 0 from 34 percent.
- A new indicator was introduced to better capture the project’s gender impacts, viz. “Number of jobs created disaggregated for women and men”.

1.4 Main Beneficiaries

8. The primary beneficiaries of project interventions included farmers (large and small, including household farmers) as well as agribusinesses in seven regions of the country.¹ Secondary beneficiaries included commercial banks as well as members of Water Users Associations (WUAs) and irrigation administrative structures, including the Basin Administration of Irrigation Systems (BAIS) and Administration of Irrigation Systems (AIS). Improved irrigation service delivery through rehabilitation of I&D infrastructure and strengthening of WUAs was limited to seven districts, one within each of the seven regions.

Table 1. Breakdown of Project Beneficiaries

Beneficiaries	Original Target	Actual Achieved
<u>Component 1: Credit Line</u>		
Sub-loan Recipients	800	570
PFI Specialists trained	200	573

¹ Project Regions/I&D Districts were as follows: Andijan/Ulugnor; Bukhara/Ulat; Kashkadarya/Mirishkor; Samarkhand/Pastdargom; Syrdarya/Bayavut; Tashkent/Buka; and Ferghana/ Yazyavan

Component 2(a): I& D Rehabilitation			
Farmers to benefit from inter-farm works (Of these, number to benefit from on-farm works)	7,000 (3,500))))	20,593 ²
Component 2 (c): Farmers trained in improved I&D technologies (this includes farmers under 2a)	No data))	
Component 2(b): WUA, AIS and BAIS specialists	No data		11,467
Component 3 (RTAS) improved farm management and environmentally friendly agricultural practices	83,720 / 61,000 (PAD/ AF)		61,426
Total	91,720/69,000		94,629

1.5 Original Components (as approved)

9. The approved project components were as follows:

10. *Component 1: Rural Enterprise Finance (Appraisal: US\$36.70 million; Actual at End-of-Project (EOP): US\$72.13 million).* The component comprised the following activities: (a) *Credit Line for Loans and Leases (US\$ 36.20 million)* which was designed to finance investments in, *inter alia* agricultural machinery and equipment, horticulture, livestock, bee-keeping, fish farming and other long-term investments. A small working capital facility, in the amount of up to 20 percent of the total available funding for the Credit Line, was also included. The loan size ranged between US\$300,000 and US\$50,000. The credit line was also available for micro-finance; and (b): *Credit Line-Related Technical Assistance Activities (US\$ 0.50 million)* which supported a training program for the PFIs, MFIs, leasing companies and farmers.

11. *Component 2: Irrigation and Drainage Component (Appraisal US\$24.86 million; Actual at EOP: US\$26.38 million).* The objective of the component was to improve water management of irrigated areas in seven districts through the following: (a) *Rehabilitation of Irrigation and Drainage Systems (US\$25.90 million)* on around 90,000 ha focusing on critical inter-farm and on-farm I&D infrastructure; (b) *Strengthening of Water Users' Associations (WUAs) and the capacity to train and strengthen WUAs (US\$4.25 million)* focusing specifically on 84 WUAs in the project districts to effectively manage, operate and maintain the I&D systems on their balance sheet and strengthen the government capacity to train and support WUAs; and (c): *Support for Improved I&D Technology (US\$1.23 million)* through investments in demonstration plots to train farmers in innovative water management technologies as well as agricultural practices.

12. *Component 3: Rural Training and Advisory Services Component (Appraisal: US\$2.60 million; Actual at EOP: US\$1.60 million).* The objectives were to: (i) provide

² This includes farmers in the I&D districts benefiting from the inter-farm and on-farm works under Component 2(a) as well farmers trained by the Swiss Agency for Development and Cooperation (SDC)-supported Farmer Field Schools on improved I&D technologies under Component 2(c).

training and advisory services to newly independent farmers in various farm management skills; and (ii) increase availability of technical information and advisory services.

13. *Component 4: Project Management (Appraisal: US\$2.50 million; Actual at EOP: US\$4.45 million).* The Rural Restructuring Agency (RRA) that had implemented RESP was responsible for implementing the project. The RRA established small offices in the seven project regions for day-to-day management of implementation activities at the grassroots level.

1.6 Revised Components

14. Component 1 : Rural Enterprise Support was revised during project implementation as follows:

(i) *Additional Financing.* Demand for Credit Line was high with funds disbursed faster than anticipated. In view of such accelerated disbursements and the continued significant unmet demand for investment resources from agribusinesses, the GOU requested an additional credit in the amount of US\$40.0 million to be used for financing horticulture-related investments. Approved in September 2012, the AF and introduced the following changes to the Credit Line (as well as extended the closing date of the project by 21 months to December 31, 2016 and triggered revisions to the RF as stated in para. 24):

- the maximum loan size was increased from US\$300,000 to US\$500,000 and to US\$1.0 million for storage facilities due to the increase in average farm size;
- the interest rates on the Subsidiary Loans both in US Dollars and UZ Soums to the PFIs would be different from the original project due to the changes to the interest rate that the Republic of Uzbekistan would need to pay to IDA. The GoU received the additional credit on standard blend IDA terms at a fixed interest rate of 1.25 percent per annum, in addition to the service charge of 0.75 percent per annum, with a maturity of 25 years and a 5 year grace period; and
- Jizzakh region was added to the Credit Line sub-component to provide its farmers/enterprises the opportunity to apply for sub-loans.
- The

(ii) *Revision to the Provision of Micro-loans.* Following a Government request, the Bank re-allocated the entire amount of US\$5.0 million equivalent originally allocated for lending through the micro-finance sector to the main Credit Line. Smaller sub-loans were subsequently provided to borrowers through two PFIs.

1.7 Other significant changes

15. *Parallel Financing.* In March 2009, the Swiss Agency for Development and Cooperation (SDC) signed a technical assistance (TA) agreement with the GoU to provide parallel financing for the implementation of activities under RESP II components 2(b): *Strengthening of WCAs and the capacity to train and strengthen WCAs* and 2(c): *Support*

for Improved Irrigation and Drainage Technology. The Swiss TA was planned in two phases with an overall contribution of US\$7.70 million: the first phase was implemented from March 2009 through February 2012. The implementation of the second phase was from March 2012 through June 30, 2015. The parallel financing triggered a project restructuring to reallocate resources under Component 2(b) to 2(a) for I&D rehabilitation works as described in Section 2.2, para. 24 (iv).

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

16. **RESP II built on the experiences of RESP I and lessons learned were incorporated in project design.** Project preparation focused on improving the range of tested and proven RESP I component activities and dropping or amending those that had not been fully satisfactory. The aim was to replicate the good work achieved under RESP I and expand the reach of project activities from five districts to seven regions³ as well as address additional sectoral challenges related to financial and environmental sustainability. The project selected seven regions that were dominated by rural populations and heavily concentrated on agriculture. The districts selected for I&D support included areas where irrigated farming was the most important source of income. Lessons learnt and reflected in project design were as follows:

(i) *Rural Finance.* A broader selection of financial products (such as micro sub-loans) and investment categories were included that would be critical to reach a wider range of beneficiaries as well as aid the diversification of lending. Such diversification would help lenders in developing a more balanced lending portfolio and enable them to develop a wider range of skills in assessing different types of risks. For credit recipients, access to new financial products and for an expanded set of investments, would enable them to diversify their businesses, manage their risks more efficiently and enter into new profitable activities.

(ii) *Irrigation and Drainage.* Under RESP, investments per hectare were relatively low (US\$85/ha) which allowed for only partial rehabilitation of I&D infrastructure in some cases. RESP I demonstrated the efficacy of a higher per hectare investment to enable more comprehensive and durable rehabilitation of critical sections of the I&D system. Under RESP II, the allocation was therefore increased to US\$255 ha. RESP I also underscored the need for a participatory and transparent process for the selection of I&D systems for rehabilitation to build strong ownership and sustainability of the rehabilitated systems that would endure beyond the life of the project. Additionally, RESP demonstrated that institutional change is a long-term undertaking and there was a need for continued support to WUAs and the supporting institutional irrigation systems to increase their capacity for effective O&M of their I&D systems.

³ RESP activities were implemented in five districts – one district each in five regions while activities supported under RESP-II were undertaken in seven regions, with I&D activities focused in select areas within a single district in each region.

(iii) *Advisory Services*. RESP, which was designed to achieve full cost recovery for training and advisory activities, demonstrated that this was not feasible given the economic situation of project beneficiaries. RESP II was therefore designed so that the majority of costs for such activities would be borne by the project. However, to ensure strong participation and ownership, RESP II included a farmer contribution to some of the costs of the training (percentages to depend on the type of training and the degree of public good benefits). RESP also confirmed that training be practical in its delivery method (more field visits and farmer-to-farmer approaches) and that it be provided by local trainers for greater receptivity and uptake by beneficiaries. All these important design elements were incorporated under RESP II.

17. The project was prepared in consultation with potential beneficiaries and responded to farmer priorities identified in the beneficiary assessment undertaken during project preparation. A qualitative social assessment (SA) was undertaken by the GoU during project preparation to better understand stakeholder expectations and to determine how the poorer farmers, the newly established private farmers and those relying on their home gardens could best benefit from the project. The SA reconfirmed the findings of RESP I in that farmers had three main concerns: (i) lack of access to credit, including long-term credit and high interest rates; (ii) inadequate irrigation and drainage services and weak legal and management capacity of WUAs; and (iii) lack of access to information on innovative technologies and alternative crops as well as lack of essential machinery and spare parts. Project activities under each component were designed to take these considerations into account. This built strong ownership and commitment to the project, both at the national as well as local levels, throughout the life of the project.

18. The project design supported more financially attractive sub-sectors. The project focused on providing investment and technical assistance for subsectors such as horticulture, livestock, poultry and fisheries that would help private farmers and agribusinesses to generate higher profits by selling higher value crops as well increasing value-added processing. This in turn would also help to create jobs and improve incomes in the rural sector, both on-farm and off-farm.

19. The project included actions to ensure that no forced or child labor was supported through project interventions. The SA noted some use of child labor in the areas where consultations were conducted which raised general concerns about farmers' seasonal hiring of children, starting from the fifth grade, to pick cotton in some districts. Although the GoU was already taking steps to eliminate this practice, all relevant project documents included necessary requirements to ensure that potential beneficiaries seeking credit for farm investments would comply with all national child labor laws and regulations. The project also included financing of third party social monitoring that would monitor the use of child labor under the project. In addition, the project financed public awareness and training programs to inform and educate the farming community and the rural public at large about child labor issues and relevant legislation prohibiting these practices.

20. Quality at Entry. Most of the relevant project documents and implementation arrangements were in place at the time of project approval. All necessary project

documents, including supporting materials such as the Credit Line Manual, Terms of Reference for the I&D consultancy services, procurement plan for the first eighteen months and a Project Implementation Plan (PIP) were in place at the time of project approval. A well-staffed RRA in Tashkent was also in place having recently completed implementation of RESP I. However, the RRA regional offices had not been established by Board approval due to delays in internal governmental processes.

21. **There were several shortcomings in the quality of the RF at entry.** An indicator for measuring the PDO outcome related to increased profitability of agribusiness was absent. Some indicators were repetitive with one serving both as a PDO outcome indicator as well as an intermediate indicator. Additionally, the PDO-level indicators to measure the PDO outcomes on financial and environmental sustainability are questionable. For example, to measure the PDO outcome on environmental sustainability, the corresponding PDO-level indicator was “Farmer access to information about and demonstrations of environmentally sustainable practices improved”. This indicator qualifies more as an intermediate outcome indicator than a PDO-level one. A more applicable PDO-level indicator might have been the number/percentage of farmers actually adopting the environmentally sustainable practices

2.2 Implementation

22. **Although both the original project as well as AF experienced some start up delays, overall project implementation was smooth.** There was a six-month lag between Board approval and effectiveness of the project due to the time required for the completion of internal governmental processes, including the issuance of the Presidential Resolution for project implementation. The GoU and Bank team made productive use of this time to establish the RRA regional offices in all the seven project regions so that all were well staffed and equipped by the start date of the project. Additionally, the Subsidiary Agreements between Ministry of Finance (MoF) and PFIs were delayed by another nine months due to lengthy internal review and approval processes of the government. This delayed the start of implementation of the Credit Line. However, once the credit line became effective, it disbursed rapidly so that by the mid-term review in 2012 the entire allocation under the Credit Line had been disbursed. Effectiveness of the AF took 20 months after Board approval due to protracted internal processes of the GoU. However, as under the original project, once the AF became effective, the credit line disbursed expeditiously and entire allocation was fully disbursed four months before project closing.

23. **Overall project implementation remained largely on track.** The RRA was highly experienced with implementing Bank and other donor-funded projects in the agriculture sector and took rapid, proactive measures in addressing any issues as they arose. Similarly, SDC which implemented activities related to WUA capacity building as well as provided training on improved irrigation practices successfully completed all activities in accordance with the agreed implementation plan in a timely manner.

24. **The project was restructured four times to respond to evolving circumstances.** These included three re-allocations and one AF as follows:

(i) *Reallocation of Funds for I&D Consulting Services.* In response to a letter from the MoF dated December 20, 2010, the first restructuring reallocated US\$227,549 from Category (6) “Unallocated” to Category (3) “Consultants’ services, training and audit” due to higher than estimated contract values for developing detailed engineering designs for the I&D rehabilitation works.

(ii) *Reallocation of Micro-sub-loan Funds.* In response to MoF’s letter dated February 27, 2012, a restructuring was undertaken in March 2012 to: (a) reallocate US\$5.0 million equivalent within Category (4) from the sub-category “(b) Micro-sub-loans under Part A.1” to the sub-category “(a) Investment and working capital sub-loans and lease financing under Part A.1”; and (b) drop micro-sub-loan related indicators in the RF. These changes were introduced due to the fact that Credit Unions, which were expected to be the main financial intermediaries under the microfinance facility, no longer existed. The project subsequently provided sub-loans to smaller borrowers through two PFIs: (a) Microcreditbank, which provided 121 sub-loans in the total amount of US\$7.5 million, averaging US\$61,983 per sub-borrower; and (b) Agrobank, which provided 218 sub-loans for the total amount of US\$17.1 million, averaging US\$78,440 per sub-borrower which was below the project-average of US\$128,120.

(iii) *Additional Financing.* By 2012, the Credit Line had been fully disbursed due to a high demand by farmers and agribusinesses in the project area. To meet the continued high demand for credit support, the GoU requested an additional \$40.0 million under the Credit Line for supporting investments in the horticulture sub-sector. The project was thus restructured to process the AF of US\$40.0 million. The restructuring included a revision to the RF as well as an extension of project closing date by 21 months to December 31, 2016 to enable complete disbursement of the additional funds.

(iv) *Re-allocation due to availability of Parallel Financing.* The project successfully leveraged support from the SDC to provide parallel, non-reimbursable support in the amount of US\$7.70 million for implementation of Components 2(b) and 2(c) related to WUA capacity building and training in improved I&D technologies respectively. The SDC entered into an agreement with the GoU and signed a Memorandum of Understanding (MoU) with the Bank in 2009 for the implementation of these activities. The infusion of these additional resources enabled the team to increase IDA support for I&D rehabilitation works. During project preparation, it was estimated that the IDA allocation for irrigation infrastructure rehabilitation works would enable rehabilitation of some 50 objects. However, during implementation it became evident that this was an optimistic estimate and the number of objects for rehabilitation support would need to be scaled back to about 40. With Swiss support now available, the freed up resources under Component 2(b) allowed the financing of an additional four objects for rehabilitation. A project restructuring was undertaken in 2014 to re-allocate about US\$1.60 million from the US\$4.25 million allocation under Component 2(b) to Component 2(a) to undertake some additional rehabilitation works. The remaining US\$2.60 million under Component 2(b) were retained for provision of O&M equipment, such as excavators and bulldozers for channel maintenance as well as communications and transportation equipment for day-to-day operations of WUAs.

25. **Although the restructurings provided opportunities to improve the overall quality of the RF, adjustments made were limited.** The team was remiss in not capitalizing on these available opportunities to address the shortcomings in the RF. Some improvements were made at the time of the AF, for example, removal of duplicate indicators. More importantly, the RF could have benefited from the inclusion of intermediate outcome and output indicators for measuring the PDO outcome related to increased profitability of agribusinesses.

26. **The project put in place additional measures related to child and forced labor in response to an Inspection Panel Case during implementation.** In September 2013, the Bank received a complaint from three local Uzbek and one international NGOs addressed to the Inspection Panel alleging that the project was contributing to child and forced labor in the cotton sector. In November 2013, the Bank submitted the Management Response to the Panel, stating that any harm that may have stemmed from the incidents cited in the complaint were not caused or aggravated by the project. The response also outlined a range of additional mitigation measures and binding provisions that the project team effectively incorporated and followed during implementation. These are detailed in Annex 10. Throughout the remaining lifespan of the project, the Bank team significantly bolstered support to address child and forced labor, including through the implementation of third party monitoring (TPM) of child and forced labor across the Bank's portfolio. On December 19, 2014, the Inspection Panel issued its 'Final Eligibility Report and Recommendation' under which it indicated that it would not undertake a full inspection based on the satisfactory Bank Management Response.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

27. **M&E Design.** The project developed an M&E system in the RRA to monitor progress under each activity. The design of the RF fed into the M&E design so that indicators reflected in the RF could be tracked and measured. As the quality of several RF indicators as noted above in paragraph 21 were wanting in some aspects, it affected the design of the M&E system maintained by the RRA. While the M&E design made limited provision for analyses of the collected data it did make provision for detailed monitoring of the various project activities through appropriate templates.

28. **M&E Implementation and Utilization.** All project activities were closely monitored by RRA – both by staff at headquarters in Tashkent as well as those in the seven regional offices. A full-time M&E specialist was hired at RRA-Tashkent for overall M&E responsibilities. For the Credit Line, a Credit Line Coordinator was hired at the RRA Tashkent office together with Credit Line Specialist in each of the regional offices. The Credit Line Coordinator reviewed each sub-loan application approved by the PFIs and monitored progress during implementation of the sub-loan. The Credit Line Coordinator, as well as credit line specialists, undertook regular site visits to monitor progress with each sub-borrower's investment as well as visited all PFIs to review relevant documents related to the project sub-loans no later than four months from the disbursement of the sub-loan. Additionally, PFIs submitted periodic progress reports to the RRA on *inter alia*, loan

applications, loan effectiveness, and repayment. The I&D consulting firm provided monthly reports on progress with the rehabilitation works to the RRA that followed up with site visits.

29. The SDC undertook regular monitoring of activities related to WUA and farmer capacity building and training and undertook surveys in 2012 and 2015 to assess achievements, gaps and lessons learned. Regular progress reports were provided to RRA on status and next steps.

30. An impact assessment of the project was undertaken by RRA at the time of AF preparation to assess project progress and impacts related to the Credit Line. The assessment provided useful information on sub-loan trends, priority areas for agribusiness support, impacts of the sub-loans in terms of increased sales, increased profits and improved incomes which helped to make a good case for the AF.⁴ However, the end-of-project impact assessment was not rigorous, which was a missed opportunity to fully capture the positive results achieved under the project. For example, the assessment did not capture data on increase in enterprise profitability, volume of sales or processing volume which were critical to measure achievement of project outcomes. Although it should be noted that such information was kept on record by the PFIs for all sub-loans.

2.4 Safeguard and Fiduciary Compliance

31. **Environment.** The safeguards triggered under the project included: Environmental Assessment (OP4.01 and Projects on International Waterways OP7.50).

32. **The project was classified as an environmental category B (Partial Assessment) and was not expected to have any significant or irreversible environmental impacts.** Institutional capacity for environmental management was established in the RRA through recruitment of a full-time environmental specialist to support implementation of the project in conformity with the Environmental Management Framework (EMF). The environmental specialist undertook regular site visits to ensure contractors' compliance with environmental safeguards. The specialist prepared semi-annual reports covering environmental audits for the I&D contractors, M&E indicators listed in the Environment Management Framework (EMF) such as groundwater depth and salinity; and environmental training. The environmental compliance on a sub-project level was ensured through a mechanism of screening and preparing sub-project specific environmental due-diligence instruments as per the relevant provisions of the EMF, which then were closely supervised by RRA. The PFIs' capacity to handle the environmental aspects of proposed sub-projects had been built under RESP I and enhanced under RESP II. Training sessions were also delivered to farmers and WUAs.

⁴ A survey of 70 sub-loan beneficiaries (10 from each project region) showed that, as a result of the sub-loans, the following impacts had been achieved: (a) creation of 279 jobs; (b) average increase in enterprise sales of 86%; (c) average increase in enterprise profits by 306%; (d) average increase in household incomes by 151%; (e) average increase in the processing volume of 20%; (f) average increase in the yield per ha of 32%; and (g) average increase in the number of heads of animals by 230%.

33. **No major safeguard issues arose during project implementation.** The regular monitoring reports of the RRA environmental specialist concluded that the mitigation measures identified by sub-project specific environmental due-diligence documentation were mainly followed by sub-project beneficiaries. These included proper management of construction and agricultural wastes, regulated use of pesticides and fertilizers (although these were not financed under the project some sub-projects triggered the increased use of pesticides), and efficient and authorized use of water resources (for example, intensive use of drip irrigation). The overall conclusion drawn from those quarterly reports of the RRA Environmental Specialist is that the project has been implemented in compliance with the provisions of the project EMF and requirements of sub-project specific environmental documentation.

34. **Social. The key social issues that arose during project implementation was related to the risks of child and forced labor during the cotton harvest.** While the project did not in any way contribute to the cotton production system directly, there were two types of indirect connections: (i) in the early phase of the project, some of the entrepreneurs receiving sub-loans for non-cotton related activities, were also involved in cotton production; and (ii) some of the farmers benefiting from the water canal repairs under component 2 of the project were also growing cotton. For these beneficiaries, preventive measures put in place including legal clauses in the agreements between the members of WUAs and the farmers on the prohibition of child and forced labor as well as training and information awareness activities on preventing child and forced labor. In accordance with Bank Management response and recommendations of the Inspection Panel, several additional steps were undertaken to safeguard against support for child and forced labor which are detailed in Annex 10.

35. **OP 7.50: Projects on International Waterways. Although OP7.50 was triggered, the project received an exception to the “Notification to Riparians”.** The exception was approved by the Regional Vice President (RVP), on the basis that the I&D activities would be limited to rehabilitation of existing schemes and would not adversely change the quality or quantity of water flows to the other riparians.

36. **Financial Management. Financial Management (FM) arrangements are assessed as ‘Satisfactory’.** FM areas such as planning and budgeting, accounting and reporting, including Interim Financial Reports (IFRs) submission, accounting system and flow of counterpart funds were satisfactory. As the project closed on December 31, 2016 with a grace period ending on April 30, 2017, audited project financial statements covering the period from January 1, 2016 to April 30, 2017 are due to the Bank by June 30, 2017.

37. **Procurement. The risk to procurement implementation was rated “high” given that the country did not have a public procurement environment conducive to transparent and economic procurement.** However, the project benefited from an experienced RRA that had implemented RESP I and therefore was knowledgeable in procurement procedures. Throughout the life of the project, procurement was carried out in line with the applicable Procurement and Consultant Guidelines in a diligent and timely manner. There were no deviations from the agreed provisions during the implementation of

procurement processes. All documentation related to each procurement procedure were duly filed and readily available. Most of the contracts were implemented on time. Procurement processes, recording of processes, contract implementation, and file maintenance were well managed by the project team and procurement specialist.

2.5 Post-completion Operation/Next Phase

38. **The Government is committed to supporting O&M of the rehabilitated inter-farm and on-farm I&D systems after project closing and has allocated funds for this.** GoU has allocated state budget for O&M of the inter- and on-farm works undertaken by the project. Additionally, the MoF under its Irrigation and Amelioration Fund has provided funds for I&D O&M financing. This is a positive development as these efforts will contribute to sustainability of the rehabilitated systems after project closing.

39. **In line with its strategy of agricultural diversification to more profitable subsectors, the Government requested Bank assistance to scale up RESP II successes in the horticulture subsector and deepen overall subsector development.** In 2014, the Bank prepared the Horticulture Development Project (HDP), an IBRD loan in the amount of US\$150.0 whose objective is to “enhance the productivity and profitability of horticulture sector in the project area”. The project envisages to achieve this through the provision of: (i) *Agricultural Support Services* to promote the adoption of improved technologies and practices by farmers, value chain development through measures to strengthen market information and food safety systems as well as technical assistance to the government on improving the policy environment in the horticulture sector; and (ii) *Access to Credit* to increase access to finance by farmers and private sector entrepreneurs to undertake the needed investments to improve their competitiveness. The design of HDP drew on the experiences of RESP II and in large part replicated its proven components and sub-components. Thus, HDP, a direct result of RESP II achievements, will contribute to the sustainability of RESP II activities and consolidate the gains achieved in the sector.

40. **Similarly, the Government also requested Bank support for the further development of the livestock subsector that had received investment support under RESP II.** The Bank recently approved the Livestock Sector Development Project which aims to improve livestock productivity in project areas through (i) public investment framework and public services; and (ii) livestock value chain modernization. The project will provide credit and advisory and training services, among others, to private farms and firms engaged in livestock production and processing which would help to sustain RESP II results and contribute to creating jobs, improving rural incomes and promoting regional equity.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

41. *Relevance of Objectives (Substantial).* The project’s objectives, as reflected in the PDO statement in the Financing Agreement, are comprised of four key outcomes: (i)

increased productivity; (ii) increased financial sustainability in agriculture; (iii) increased environmental sustainability in agriculture; and (iv) increased profitability of agribusiness. All four elements of the PDO remained highly relevant to the World Bank Country Partnership Framework (CPF) for Uzbekistan FY16-FY20 at the time of closing.

42. Under Focus Area 1, the CPF highlights the need for private sector growth and in this context seeks to, *inter alia*, (i) strengthen private sector access to finance and financial services; and (ii) stimulate private investment and job creation in agribusiness (p. 16, para 41).

43. The aims of Focus Area 2 are to: (i) facilitate a market-led modernization of the cotton sub-sector to increase productivity including measures to prevent forced labor; and (ii) diversifying agriculture toward higher value, more job- and less water-intensive crops. In this context, the CPF emphasizes the important role of agriculture in Uzbekistan's economy and the Bank's strategy for continued engagement in the sector: "*Agriculture merits special focus because it remains the largest source of employment, especially of the poor and women, it offers large opportunities for productivity improvements, and it embodies many of Uzbekistan's most pressing environmental sustainability issues.*" (p. 13, para. 35).

44. *Relevance of the Design and Implementation (Substantial)*. All project activities and components were clearly designed to contribute to the achievement of the PDO outcomes. The project design had a relatively clear program logic as reflected in the RF. Overall, there was a relatively sound logical progression from expected outputs to expected intermediate outcomes and eventually to expected PDO outcomes. However, the logical framework could have benefited from the inclusion of outcomes and indicators related to profitability of agribusinesses.

45. A summary of the relevance of the design of project components to the achievement of the four key PDO-level outcomes is as follows:

(i) *Increased productivity in agriculture* was designed to be supported by improving the I&D infrastructure as well as provision of machinery for maintenance of I&D systems for improved water supply and drainage and increased yields under Component 1 as well as the provision of training on modern agricultural technologies and advisory services for improved volume and quality of production under Component 3.

(ii) *Increased financial sustainability in agriculture* was designed to be supported by training PFIs to lend to the agricultural sector and increase their agricultural portfolio, especially with long-term lending to farmers and agribusinesses as well as by providing training to farmers in developing high quality business plans for ensuring financial sustainability of their investments and improving their access to finance under Component 1 as well as maintenance of the rehabilitated I&D infrastructure by the WUAs under Component 2.

(iii) *Increased environmental sustainability in agriculture* was designed to be supported by I&D infrastructure improvements for, *inter alia*, reducing groundwater levels and decreasing salinity from water logging due to poor drainage under Component 2 as well as increasing the knowledge of farmers in water saving technologies and other environmentally friendly agricultural practices, such as pest management, conservation tillage, manure management, etc. for protection of the country's natural resources under Component 3.

(iv) *Increased profitability of agribusiness* was designed to be supported by providing training to farmers and agribusinesses to prepare high quality business plans and credit applications to improve their access to finance investments in higher value crops and value-added processing activities for improved sales, higher product prices and increased revenues as well as by providing training to PFI staff to appraise sub-loan applications and investments and increase their agricultural portfolio under Component 1.

3.2 Achievement of Project Development Objectives

Rating: **Substantial**

PDO Outcomes 1: Increased Productivity

46. **The I&D rehabilitation works successfully improved water supply as well as drainage flows in the project area.** All inter-farm and on-farm irrigation and drainage works were successfully completed and handed over to responsible institutions for O&M. Inter-farm rehabilitation works were identified and prioritized through a participatory and transparent process based on clear criteria for returns on investment. For on-farm works, the project adopted a farmer-driven approach so that the final identification and design of rehabilitation works was done by WUA members in consultation with water bailiffs and district authorities. This contributed to building commitment for O&M of the rehabilitated infrastructure by the WUAs. The total command area benefitting from the improved I&D infrastructure is estimated at approximately 139,500 ha which exceeds the original target of 91,000 ha by about 53 percent. With project support, irrigated areas with adequate water supply and drainage in the project districts went up 214 percent (end-of-project target exceeded by 229 percent). The area of land with adequate irrigation water supply went up by over 13 percent from the baseline in 2008 and the area of land with adequate drainage increased by over seven percent by project end. According to the end-of-project impact assessment, loss of water during transportation fell by about 36 percent, from 23.7 percent in 2010 to 15 percent in 2016. Through rehabilitated I&D infrastructure, the project has reduced water logging and groundwater levels as well as soil salinity, improved canal efficiency, water delivery and drainage flows, water use efficiency and quality of arable land.

47. **Training in modern agricultural technologies improved beneficiaries' knowledge and skills for improving productivity.** The project provided training on a variety of topics related to improving farm productivity. These included, *inter alia*, improving soil fertility, integrated pest management, pesticide handling, organic farming and water management/water saving technologies. Through workshops and demonstrations, the project trained 61,426 farmers and agro-processors.

48. **The combination of improved I&D infrastructure and training in good agricultural practices contributed to increasing yields per hectare for key crops in the project districts.** The project measured average increase in yields per ha for nine key crops in the seven project districts with I&D interventions to demonstrate increased farmer productivity. These included wheat, corn, rice, cotton, potatoes, vegetables, melons, fruits and berries, and vineyards. The M&E data indicates that the average increase in yields per hectare was approximately +33 percent. However, based on the information provided in the end-of-project impact assessment, the weighted average increase is approximately 12.0 percent across the seven project districts. Nevertheless, the project was successful in increasing yields per hectare and it can be safely assumed that this increase was at least 60 percent of the target set at appraisal which is relatively substantial given the minor nature of the rehabilitation works.

PDO Outcome 2: Increased Financial Sustainability

49. **The project strengthened the overall institutional capacity of WUAs for improved I&D infrastructure O&M.** All WUAs in the seven project districts were reorganized into 65 Water Consumers Associations (WCAs) according to hydrographic boundaries and re-registered as non-governmental and non-commercial entities. The reorganization of the WUAs from administrative boundaries to canal-level boundaries, in accordance with international best practice, is a notable achievement under the project and is serving as a model for nation-wide replication. The total command area of the WUAs is approximately 245,000 ha with 4,000 ha on average per WUA. Training, both theoretical and practical, was provided to WUA administration and Council members on institutional, legal, financial and technical aspects of WUA operations. With project support, all WUAs are now operating based on approved: (i) Operational and Financial Management plans (OFP), (ii) demand-based water schedules, and (iii) O&M plans. Adequate governance and management procedures are in place which has helped to increase capacity of WUA administration for fee collection. Thus good strides have been made in increasing institutional capacity of WUAs.

50. **The project provided small equipment and tools (e.g., generators, excavators, laser levelling equipment) to each WUA to facilitate maintenance work such as cleaning of canals and collectors on the on-farm network.** The maintenance work conducted by the WUAs went up by 87 percent from the baseline of 34 percent at project approval. Water users are generally satisfied with WUA performance. According to the results of the end-of-project impact assessment survey undertaken in 2016, 82 percent of water users expressed satisfaction with WUA performance.

51. **These achievements are remarkable especially in light of WUAs' baseline status.** Farmers were generally unaware of the role of WUAs at the time of project preparation. They considered these associations as governmental entities and were reluctant to become members. None of the WUAs had offices and administrative functions, such as water scheduling, development of O&M plans, etc. were virtually nonexistent. Most suffered from high staff turnover. However, the project has played a critical role in improving the

functioning of WCAs. Today, farmers confirm that they visit the WUA offices regularly, take part in the General Assembly meetings, and discuss and agree on the WUA operational plans and fees set up by the management. Farmers also report conflicts over water have considerably decreased since the setup of the new WUAs. The WUAs have also successfully attracted membership of smaller farmers and individual household farmers which is also helping towards strengthening WUA budgets.

52. WUA financial performance remains limited although revenues of almost all WUAs have increased over the life of the project. Due to low Irrigation Service Fee (ISF) collection rates and high operating costs most WUAs continue face financial difficulties. The main portion of Irrigation Service Fee (ISF) payments is collected through state loan tranches for cotton and wheat production which are often below the level O&M budgetary needs. For example, in 2014, only 42 percent of the state quota for cotton production financing allocated for WUAs' services was actually transferred to the project area WUA accounts. This resulted in average ISF collection rate in the project WUAs decreasing by 7 percent in 2014 vis-à-vis 2011 (38 percent vs. 45 percent). Another factor affecting financial sustainability is the increasing cost of salaries and payroll taxes so that actual average WUA expenditures per hectare went up by 35 percent between 2011 and 2014. On average, 60 percent of actual expenditures are used for salaries and staff allowances.

53. A positive development is that the per hectare user fee collection has increased. Between 2011 and 2014⁵, fees collected per hectare went up by 32 percent - to 9483 UZS/ha from 7,193UZS/ha. This is largely due to the improved I&D infrastructure which allowed an increase in the level of fees charged by WUAs for improved water delivery services. Currently, about 50 of the 65 project WUAs are implementing about 75 percent of their planned O&M program which could be considered an adequate level especially given that this is a much higher percentage than among WUAs not supported by RESP II. Thus although there are considerable positive trends in WUAs' overall performance, their financial capacity remains limited to effectively operate and maintain their I&D systems. Given their financial status, in 2013, the GoU passed a decree under which all WUAs were exempted from repayment of donor-financed investments which were henceforth to be treated as grants provided on a no cost recovery basis.⁶

PDO Outcome 3: Increased Environmental Sustainability

54. The rehabilitation of the drainage system improved soil and water quality and enhanced environmental sustainability in the agricultural sector. The rehabilitation of the drainage system contributed to reducing water logging in the seven districts targeted for I&D works. The end-of-project impact assessment indicates that with reduced water logging, groundwater levels as well as salinity in the project area have reduced: it is estimated that the level of saline lands decreased from 18 percent in 2010 to 13 percent in

⁵ As SDC completed the implementation of its work program in 2015, data related to SDC-supported activities is available until year 2015.

⁶ At project approval it had been envisaged that WUAs would repay 50 percent of the cost of the on-farm works over 15 years as well as 100 percent of the cost of the maintenance equipment over 10 years both at an interest rate of 0.75 percent annual percentage points.

2016. This is also a key factor leading to the increase in crop yields among farmers in these seven project districts as well as improvement in reclamation of land as well as increase in area under cultivation.

55. The project provided advice and training on innovative water-saving technologies which helped to increase on-plot water productivity and rational water use. Over 62 Farmer Field Schools (FFS) were established by SDC for demonstration of simple and affordable water saving technologies. Water saving irrigation methods, such as drip irrigation, use of black perforated film for furrow irrigation and flexible hoses were demonstrated over 751 ha. The project also installed water measurement and control structures for more efficient use of irrigation water and provided training in their use. The impact of the FFS demonstrations has been substantial. For example, during the 2014 vegetation period, the use of the perforated film showed that on average per hectare consumption of irrigation water and fuel decreased by 20-25 percent and 25-30 percent respectively and yields increased by 2-4 centner/ha. Between 2010 and 2014, the water productivity at the 62 FFS plots increased from 0.68 kg/m³ to 1.15 kg/m³ for wheat and from 0.51 kg/m³ to 0.86 kg/m³ for cotton.

56. Farmers trained are adopting several of the demonstrated water-saving technologies. About 20,593 farmers were trained. The SDC final progress report indicates that almost 96 percent of farmers noted the high quality of the training material content, presentation, simplicity and ease of understanding. Over 77 percent noted that the training materials could be successfully applied in practice. The total component cost was US\$1.55 million, with a farmer contribution of US\$536,099, i.e. farmers contributed 35 percent to the cost of the training which is testament to their interest in and commitment to such training. The SDC final progress report indicates that 30 percent of neighboring farmers are now also implementing these water saving technologies after learning of their benefits and subsequently receiving training from WUA support staff within the AISs. The SDC final progress report included an assessment of FFS performance and actual adoption rate of demonstrated innovations. The table below provides the adoption rate of the demonstrated technologies the results of which demonstrate a high likelihood of environmental sustainability in agriculture due to project interventions.

Table 3. Adoption Rate of Improved I&D Technologies demonstrated by FFS

Technology Demonstrated	Apply	Do not apply, but are going to apply	Do not apply and are not going to apply
Water accounting and water measuring structures availability at field entry	35.1	45.1	19.8
Water record-keeping with portable weir applied	11.4	37.7	50.9
Level furrow irrigation	60.3	6.4	33.3
Short-cut furrow irrigation	63.2	7.0	29.8
Every-other furrow irrigation	66.4	5.7	27.9
Deep-end furrow irrigation	20.9	9.1	70.1
Variable flow irrigation	6.8	13.1	80.2
PE pipes-applied irrigation	6.3	34.6	59.1
Application of perforated black PE film	6.9	34.6	58.5

Irrigation applying flexible irrigation hoses	4.2	28.1	67.7
Irrigation with organic fertilizers	97	1.0	1.9
Use of collector and drainage water for irrigation	10.2	8.4	81.4
Phytomelioration	29.2	9.4	61.4
Field leveling and check leaching	42.1	5.8	52.1
Application of simple regulating structures	11.1	14.8	74.1
Winter wheat irrigation with liquid ammonia	12.5	24.4	63.1
Irrigation with magnetized water	1.3	11.1	87.6
Cotton seed treatment with high-frequency current	0.7	17.0	82.3

57. **The project built capacity at several levels to ensure sustainability of the training programs after project closing.** Water saving equipment (such as black foil, portable water measurement weirs, piezometers) were procured and handed over to the farmer operators of the 62 FFS towards building capacity and sustainability. All FFS plot operators and designated AIS staff were trained and provided with equipment and training materials to enable them to independently provide irrigation related extension advice to farmers. The project also worked closely with Farmers Association staff at both the regional and headquarters levels that can now serve as effective “Information Centers” for farmers in the project area and beyond. Training also targeted students to increase their knowledge in agriculture and water resources management; thus, the project trained the next generation of potential farmers and agro-processors in environmentally sound agronomic practices. Relevant training manuals and brochures were provided to such universities for future training programs. In this context, PFI staff were also trained in environmental awareness and environmental impact assessment and mitigation to ensure that activities financed under the Credit Line were in line with the project Environmental Management Framework. This ensured that the investments financed were, and investments financed in the future will be, environmentally sound, thereby building environmental sustainability in the sector.

PDO Outcome 4: Improved Profitability of Agribusiness

58. **The project successfully increased farmers’ and agribusinesses’ access to long-term financing.**⁷ Under the project, PFIs increased their lending to the agricultural sector and the overall agricultural portfolio of the commercial banks went up by 57 percent over the life of the project (end-of-project target exceeded by 42.5 percent). Increased willingness of PFIs to lend as well as diversify their portfolio was primarily due to the fact that the project put in place effective measures to ensure the financial sustainability of approved sub-projects. The project provided training to potential applicants on the preparation of high quality, financially sustainable business plans that would improve profitability of their operations. Each PFI was to screen sub-loan applications against the criterion that returns on investments would be at the least equivalent to the on-lending rate. The PFIs were therefore assured that only viable and sustainable sub-projects were being financed which increased their readiness to support the sector. At the same time, the project also trained relevant PFI staff in basic concepts of appraisal, risk assessment and monitoring of investment projects. Such training increased their level of confidence to provide loans for investments in the agricultural sector. Increased willingness of PFIs to lend was further enhanced by the fact

⁷ All financing was in the form of sub-loans. No leases were supported due to inability of leasing companies to qualify under the Bank’s due diligence.

that all sub-loans were repaid on time with most being repaid before the loan maturity date. The success of this activity is borne out by the high demand for sub-loans under the project which resulted in a GoU request for additional financing in the amount of US\$40.0 million equivalent to meet the continued high demand.

59. **The revolving credit line provided new borrowers additional opportunities to access finance to meet their investment needs and increased flexibility in their operations.** With a loan maturity of twenty years, the credit successfully addressed the critical need for longer-term financial assistance for productive investments in the sector. The provision of finance through the PFIs has also helped to reduce the seasonal cash flow problem among recipients.

60. **Financing was provided for a broad range of higher revenue-generating investments that contributed increased profitability of sub-borrowers.** Under the project, the PFIs diversified their lending portfolio, providing 570 sub-loans for a variety of investments in, *inter alia*, agricultural equipment and machinery; processing, storage, packaging; construction of greenhouses; livestock operations; poultry business development; and fisheries. The breakdown of the sub-loan portfolio was as follows: (i) agricultural machinery – 30.9 percent; storage/cold storage-26.2 percent; greenhouses-11.7 percent; agro-processing-9.7 percent; orchards-9.1 percent; livestock-6.3 percent; poultry-5.8 percent and fish farming-0.4 percent. Approximately 500 enterprises or 88 percent of all enterprises borrowed for four categories of investments: agricultural machinery, cold storage, greenhouses and orchards. A financial profitability analysis of 14 such enterprises financed under the credit line was undertaken and the average incremental net profit was estimated as follows: agricultural machinery: US\$3,500; cold storage: US\$218,000; greenhouses: US\$250,000; and orchards: US\$178,000.

61. **Credit for investments in postharvest infrastructure and innovative technologies helped reduce losses, especially for fruits and vegetables and milk and dairy products.** During project preparation, the beneficiary survey indicated that lack of adequate storage facilities was a significant challenge for farmers and agribusinesses. The provision of cold storage facilities helped to offset this risk and significantly improved the volume and quality of produce of sub-loan recipients. Notably, farmers in the project area that were non-recipients of sub-loans also benefitted from the provision of cold storage facilities as it was observed that the smaller producers would store their produce in the refrigerators of those assisted under the credit line. Thus the project demonstrated a good spill-over effect with the project's stream of benefits flowing to such indirect beneficiaries. Innovative packaging equipment purchased through sub-loan support also contributed to reducing losses and improving profitability among beneficiaries. For example, a livestock enterprise utilized the sub-loan for procuring an innovative packaging material for its dairy products. The material extended the shelf life of perishables, such as yogurts and cheese, by creating an effective barrier against the elements. The material is chemical free and non-toxic which also makes it EU-compliant. This technology was the first of its kind in Uzbekistan and has helped recipients with turning higher profits and thereby improving their incomes.

62. **Investments in greenhouses enabled farmers to extend their growing season and reach markets earlier in the season.** Additionally, as greenhouses used drip irrigation, the credit line contributed to promoting the use of water saving technologies under the project and thereby enhanced environmental sustainability in the agricultural sector.

63. **With improved marketable surpluses due to increased output, reduced losses as well as training in quality standards under the project's RTAS component, recipients of sub-loans increased their opportunities to capture new markets – both domestic and international.** In addition to retaining traditional markets (mainly Russia and other Central Asian countries), beneficiaries were able to tap new export markets such as Japan and South Korea as well as reach new markets in Europe where they sold their outputs at a higher price than in the domestic market. This improved access to new markets also helped to mitigate the risks of over-dependence on traditional markets, especially Russia.

64. **Higher-level Outcomes Achieved.** The project *improved private sector engagement in the agricultural sector* in line with the government's strategy of promoting market-driven, private-sector led growth in the agricultural sector. It helped the *sector to shift focus from the cultivation of state-controlled cotton and wheat to higher-value, more remunerative sub-sectors* such as horticulture and livestock. The development of these subsectors helped in unleashing new opportunities for productivity growth by diversifying the sector to more competitive value chains as well as stimulating employment in Uzbekistan's rural economy. The M&E database indicates that *the project created 2,380 jobs, 520 of which were for women*. There is also empirical evidence that *the project contributed to increasing household incomes* among project beneficiaries. Although the average increase in incomes among project beneficiaries was not measured during the last four years of project implementation as beneficiaries increasingly expressed their unwillingness to share such data, the impact assessment undertaken at the time of AF preparation indicated that average household incomes among a sample of 70 sub-loan recipients increased by 151 percent.

3.3 Efficiency

Rating: **Substantial**

65. The economic and financial analysis (EFA) at appraisal stage of the RESP-II included an assessment of: (a) financial viability of the project for farmers and agribusinesses in terms of incremental gross margin, net margin and financial net present value (FNPV) of their investments; (b) the economic viability of the project in terms of economic net present value (ENPV) and economic internal rate of return (EIRR) - this is assessed for component 1 and 2 separately; and (c) cost recovery and sustainability issues, specifically the ability of WUAs to finance incremental recurrent costs; and (d) the fiscal impact on the government. The analysis compares the without-project scenario and with-project scenario and estimates incremental costs and benefits over a 25-year period using a 12 percent discount rate.

66. The economic and financial analysis at project completion shows that selected agricultural enterprises participating under Component 1 achieved a higher net profitability

compared to the ex-ante expectations as shown in their business plans. The economic analysis of Component 1 demonstrates a high ENPV of US\$343 million and IRR of 47 percent, thus exceeding the expectations at project appraisal stage. The economic analysis of Component 2 takes into account area under rehabilitation, changed cropping patterns and yield increases as a result of project investments and shows that the project investments led to an ERR of 32 percent, an ENPV of US\$11 million or an ENPV/hectare of US\$125. The completion analysis demonstrates that the project has achieved financial and economic impacts under the assumptions that the observed adoption and resulting benefits are sustained for approximately 20 years. The results are robust when changes in adoption rates and net profits are assumed.

3.4 Justification of Overall Outcome Rating

Rating: **Moderately Satisfactory**

67. Overall, the outcome rating of the project is moderately satisfactory. All four key aspects of the PDO continued to be substantially relevant to the World Bank's Uzbekistan CPF at closing. The project design was substantially relevant, with an overall sound program logic. Achievement of the overall PDO was substantial, with all four key outcomes being largely met. Finally, efficiency is substantial with good economic and financial rates of return. Taken together, an Outcome Rating of Moderately Satisfactory is justified.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

68. **RESP II contributed to raising incomes among both direct and indirect beneficiaries of the project.** Through the provision of credit, tailored advisory services and training in modern, climate resilient agricultural practices, improved irrigation infrastructure, land amelioration through improved drainage, the project contributed to increasing agricultural yields and overall agricultural output among project beneficiaries. This provided beneficiaries with (i) (additional) food for self-consumption which resulted in household income savings as families did not have to buy food at the levels before project support; and (ii) a marketable surplus which resulted in generating additional household incomes; (iii) cultivation of organic produce that fetched higher market price. The project also generated incomes through creating jobs in the agricultural sector as beneficiaries expanded their operations and hired seasonal and/or permanent staff. This put incomes in the hands of hired workers- either for those previously unemployed or as a supplement for part-time job holders.

69. **Recognizing the generally marginalized place of women in the agricultural and rural space, the project made a concerted effort to ensure that the project's stream of benefits reached rural women.** About 11.5 percent (66) of credit line beneficiaries were women. Over 9,185 women farmers participated in training to increase their knowledge of modern, environmentally sustainable agricultural practices. Five hundred and twenty jobs were created for women. These initiatives made women more actively involved in the development of their farm operations. About 2,000 women were actively involved in the Farmer Field School trainings to learn about water saving irrigation technologies as well as

improved agronomic practices. The project also contributed to a positive shift in strengthening the role of women in WCAs. About 513 women in WCAs, AIS and BAIS were trained. Several women have been elected to the WUA governing and management bodies and more women are now involved in decision-making on water management. In 2015, women accounted for seven percent of WUA Board members compared to five percent in 2011. Such opportunities for women has significant social implications – it has served to increase their self –esteem and confidence as well as improved their standing within their households and communities.

(b) Institutional Change/Strengthening

70. **The project strengthened the institutional capacity of WUAs.** With SDC support, all WUAs in the seven project districts were reorganized into 65 Water Consumers Associations (WCAs) according to hydrographic boundaries and re-registered as non-governmental and non-commercial entities. While establishment of a WUA Federation in each project district was indicated as an optional activity under the institutional strengthening component, it was agreed not to move ahead with such an undertaking at this stage but focus on capacity building at each WUA level. Training, both theoretical and practical, was provided to WUA administration and Council members on institutional, legal, financial and technical aspects of WUA operations and currently all 65 WUAs are operating based on approved: (i) Operational and Financial Management plans (OFP), (ii) demand-based water schedules, and (iii) O&M plans.

71. **However, challenges remain as the establishment of WUA Support Units (WSUs) within the AISs did not occur due to budgetary constraints on the part of the GoU.** The WSUs were to provide regular support to WUAs to enhance their capacity for O&M. In lieu of the WSUs, the MAWR assigned 2-3 dedicated staff within each AIS to provide capacity building support to WUAs. The SDC implementation unit has trained the AIS dedicated staff (training of trainers) who have already started to train WUA members in O&M of their I&D systems. To further build sustainability, the project also trained relevant staff within the Tashkent Institute of Irrigation and Melioration (IIM) who can now provide necessary training to strengthen the capacity of AIS staff after project closing. Although good progress has been made in building WUA overall institutional capacity, their financial capacity remains limited which affects their ability to undertake effective O&M as described in paras. 52 and 53.

(c) Other Unintended Outcomes and Impacts (positive or negative)

NA

4. Assessment of Risk to Development Outcome

Rating: **Moderate**

72. **There is a continued commitment to appropriate economic, financial and sector policies on the part of the GoU which will contribute to sustaining the project's development outcomes.** The country's Development Strategy 2017-2021 specifically

identifies modernization and intensification of the agricultural sector as a priority area of focus to achieve the country's vision of becoming a middle-income industrialize country by 2050. The strategy seeks to promote, *inter alia*, diversification from cotton and wheat to more competitive value chains and increase farmer and agribusiness productivity and profitability in these areas. The program of actions laid out for support are in line with RESP objectives and design, viz. increasing acreage under higher value crops, development of farms involved both in agricultural production and processing, support for storage infrastructure, marketing, services, including financial services; further improvement of irrigated lands and introduction of water-saving and resource-conserving agricultural technologies.

73. By demonstrating the efficacy and value of project activities and building awareness at both the national and local levels of the benefits of project interventions, there is a high likelihood of ongoing support for project activities beyond the life of the project. RESP II improved the overall credit culture in rural areas. PFIs are increasingly willing to lend to the agricultural sector and the banking sector is now better equipped to finance sector needs. Relevant PFI staff have been trained in preparing forms, screening applications and a diverse set of financial products that lowered their reluctance to lend to the agricultural sector. Additionally, the project has increased the farming community's trust in banks and they are more willing to approach financial institutions for credit. Potential sub-loan recipients have also been trained in preparing high quality business plans for financially sustainable investments to improve farm and agribusiness operations. The project trained a large cohort of farmers and agro-processors in good/ sustainable agricultural practices. These were simple, low cost/affordable technologies which will ensure continued farmer uptake beyond the life of the project.

74. Maintenance of I&D infrastructure poses moderate risks to RESP II's development outcomes. Due to the limited financial capacity of WUAs there is a moderate risk to the overall sustainability of the rehabilitated systems. As mentioned earlier, the WUAs have considerably improved their financial capacity with project support although there is scope for further improvement. Also, it was foreseen that the GoU would establish a WUA Support Unit in each of the project districts with 2 – 3 assigned AIS staff. However, due to budget limitations MAWR was unable to establish these units. However, in lieu of this, the government has assigned dedicated staff in each project district AIS (a total of 18) for WUA support functions all of whom have been trained by the project. In this regard, the project also trained relevant staff within BAIS as well as TIIM to serve as WUA trainers all of which should help towards building institutional sustainability. Additionally, the GoU has made budgetary allocation for O&M under its Ameliorative Irrigation Improvement Fund. Continued recognition from farmers on the usefulness of WUAs provides a strong foundation for further improvements in their functioning. The farmer satisfaction survey undertaken by SDC upon completion of activities indicates that over 95 percent of the 1,105 farmers interviewed indicated their satisfaction with WUA performance

75. Ongoing and pipeline initiatives will also contribute to the maintenance and consolidation of RESP II outcomes. Both the ongoing Horticulture Development Project as well as the Livestock Development Project offer strong opportunities for maintaining and

scaling up project results. Both projects include interventions similar to RESP II such as provision of rural credit and training and advisory services to farmers and agro-enterprises. The continuation of these activities demonstrate the commitment of the GoU to continue with these efforts which will help to consolidate RESPII outcomes and offset risks to its developmental outcomes.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: **Moderately Satisfactory**

76. All project documents, including supporting materials such as the Credit Line manual, Terms of Reference for the I&D consultancy services, procurement plan for the first eighteen months and a PIP were in place at the time of project approval. Although four restructurings took place during project implementation, these were not a reflection of gaps or failures in project preparation. The restructurings were in response to circumstances that evolved during project implementation and were undertaken at the request of the GoU.

77. While the quality of most aspects of project preparation were satisfactory, there were several shortcomings in the quality of the RF as described in paragraph 21. Also, while the implementing agency (RRA) was staffed with key personnel by approval, the seven regional offices were yet to be established.

(b) Quality of Supervision

Rating: **Moderately Satisfactory**

78. The Bank team closely supervised project implementation. Implementation support reporting on technical, fiduciary and safeguard issues was thorough and progress towards achievement of the key performance indicators was regularly updated. All through the duration of the project, the team maintained a regular and constructive dialogue with the RRA, SDC and GoU as well as with local beneficiaries through regular field visits. Its proactive approach in managing and resolving issues that arose during implementation helped to keep project activities on track. The Inspection Panel case on child and forced labor did not adversely affect the project as the team immediately incorporated all agreed recommendations in project documents and undertook regular intensive supervision missions to ensure that there was no child or forced labor under the project. While the project was consistently rated as either Satisfactory or Moderately Satisfactory, a rating of Moderately Unsatisfactory was assigned only once and that was due to delays in effectiveness of the AF legal agreement due to protracted internal processes of the government which was beyond the control of the project.

79. While the quality of the Results Framework was improved during the time of AF preparation, the team did not capitalize on this opportunity to increase the overall rigor of the RF, for example, by adding indicator(s) to measure the PDO outcome related to increased profitability of agribusinesses supported under the project.

(c) Justification of Rating for Overall Bank Performance

Rating: **Moderately Satisfactory**

80. Due to the moderately satisfactory performance to ensure quality at entry and satisfactory quality of supervision, overall Bank performance is rated moderately satisfactory.

5.2 Borrower Performance

(a) Government Performance

Rating: **Moderately Satisfactory**

81. The GoU was highly supportive of the project, both during preparation and implementation. Counterpart financing was made available on time. The GoU has demonstrated ongoing commitment for project activities, for example, through allocating state funds for the O&M of the I&D systems in the project area.

82. The government's lengthy internal processes caused delays with approval of legal agreements which impacted project effectiveness as well as effectiveness of the AF. Also, due to budgetary constraints, MAWR did not establish the WUA Support Units within the AIS that are critical for providing training and guidance to WUAs on a regular basis. This has important implications for longer-term institutional sustainability of WUAs.

(b) Implementing Agency or Agencies Performance

Rating: **Satisfactory**

83. RRA had overall responsibility for project implementation. It had considerable experience with implementing Bank-financed projects and brought this experience to bear in the implementation of RESP II. It undertook project implementation with a high degree of professionalism and diligently followed all safeguard and fiduciary procedures as necessary. Both the RRA in Tashkent as well as the regional offices undertook field visits regularly – site visits to all 570 sub-loan recipients were made to review the investments financed. RESP II was the first project in Uzbekistan that processed an AF and the RRA ensured that all necessary steps as needed were taken in a timely manner within the agency. Additionally, the RRA coordinated closely with SDC staff to ensure smooth implementation of SDC-supported activities. Detailed progress reports were made available to the Bank in a timely manner.

(c) Justification of Rating for Overall Borrower Performance

Rating: **Moderately Satisfactory**

84. Overall, the Borrower demonstrated a high level of ownership and commitment to the project. The RRA entrusted with implementing the project performed with a high degree of professionalism and competency. However, due to occasional implementation delays, primarily as a result of lengthy internal processes within the GoU, overall Borrower performance is rated moderately satisfactory.

6. Lessons Learned

85. **Improving the skills of relevant PFI staff in investment lending, including appraisal, risk assessment and monitoring of investment projects, is key to increasing lending to the agricultural sector.** It is also important to train PFI staff in those aspects such as seasonality, exposure to weather risks and commodity price volatility risks that differentiate lending to the agricultural sector from other sectors of the economy. Such increased knowledge is key to reducing the risk aversion of commercial banks to lend to the agricultural sector. Training to PFIs must be accompanied by the provision of training to potential applicants in developing high quality business plans that signal financially sustainable investments. The assurance of financially sustainable operations would encourage lending by PFIs to farmers and agribusinesses.

86. **Intensive and phased training is critical to the establishment of well-functioning WUAs.** The project demonstrated that institutional and financial capacity building of WUAs requires extensive training over several years given the complexity of factors involved. WUA establishment and strengthening commenced under RESP I and was continued under RESP II. Although good progress had been made under RESP II, overall capacity for effective O&M remains limited underscoring the fact that building sustainability of a nascent WUA system is a long-term undertaking.

87. **Technical training must be accompanied by farm management and business planning training to ensure that inexperienced farmers establish and operate sustainable and profitable farms/agribusinesses.** As new farmers have limited knowledge of the various aspects of farming and business development, it is important that a holistic and comprehensive program of training is provided to address their knowledge and skills gap. The provision of needs-based and tailored training on a broad spectrum of business development and technical topics was key to the successful achievement of farm/enterprise productivity and profitability increases under the project.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

88. The Borrower endorsed the findings of the ICR and had no additional comments. See Annex 7.

(b) Co-financiers

89. The ICR was shared with the Swiss Agency for Development and Cooperation (SDC) that provided parallel financing for implementation of activities under Components 2(b) and 2(c). SDC expressed its satisfaction with the assessment of project performance as indicated in the ICR and provided no additional comments.

(c) Other partners and stakeholders

N/A

Annex 1 Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

Components	IDA		SDC	Percentage of Appraisal
	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Actual (USD millions)	
Rural Enterprise Finance*	72.13	72.13	0.00	100.0
Irrigation and Drainage	24.86	18.68	7.70	106.0
Rural Training and Advisory Services	1.96	1.60	0.00	81.63
Project Management	4.48	4.45	0.00	99.33
Total Baseline Cost	103.43	104.56		101
Total Project Costs	103.43	104.56		101
Front-end fee PPF	0.00	0.00		.00
Front-end fee IBRD	0.00	0.00		.00
Total Financing Required	103.43	104.56		

*Including Additional Financing

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower		7.07	5.97	84.44
International Development Association (IDA)		103.43	96.86	93.65
Swiss Agency for Development and Cooperation (SDC)		0	7.70	

Annex 2 Outputs by Component

Component 1: RESP II and RESP II Additional Financing

1. The two Credit Lines under RESP II, which included US\$36.5 million equivalent under the original RESP II and US\$40 million equivalent under RESP II Additional Financing (AF), have been fully disbursed. Any differences between the total amount of US\$76.5 and the total amount indicated below are due to the SDR/US\$ and US\$/UZ Soum exchange rate differences. The credit lines were disbursed at a good pace throughout the project period, notwithstanding the delays at the outset of the credit lines, when it took quite a long time to re-confirm with the Ministry of Finance the terms and conditions of the funds for on-lending to the Participating Financial Institutions (PFIs).

2. As of the project-end, a total of 570 sub-loans in the total amount of US\$72.9 million were disbursed from the two Credit Lines. The table below indicates the amounts for which the Subsidiary Loan Agreements (SLAs) were signed with each PFI, as well as the disbursement status under both Credit Lines as of November 20, 2016. It should be noted that different PFIs participated in the implementation of the two Credit Lines. The following six PFIs participated in the implementation of the original RESP II Credit Line: Agrobank, Hamkorbank, Mikrokredit Bank, Qishloq Qurilish Bank (QQB), Turon Bank, and Uzpromstroybank. The following nine PFIs participated in the implementation of the RESP II AF Credit Line: Halq Bank, Hamkorbank, Ipak Yuli Bank, Ipoteka Bank, QQB, Turon Bank, and Uzpromstroybank.

Table 1: PFI Activity under two RESP II Credit Lines as of November 2016

PFI	Number of Sub-loans	Total Amount	As a % of Total
	Financed	US\$ Equivalent	Sub-loan Portfolio
Agrobank	218	17.1	23
Halq Bank	49	7.2	10
Hamkorbank	59	8.5	12
Ipak Yuli Bank	16	7.6	10
Ipoteka Bank	5	2.0	4
Mikrokredit Bank	121	7.5	10
QishloqQurilish Bank	38	10.2	14
Turon Bank	38	5.9	8

Uzpromstroybank	26	6.9	9
Total	570	72.9	100

3. **Characteristics of the sub-loan portfolio:**

(i) *Maturity of Sub-loans.* Majority of sub-loans are for investment purposes, with the maturities in most cases between 36 and 84 months; in a few cases, sub-loans were provided for 24 months, and in a few cases for up to 120 months. Very few working capital sub-loans were provided with maturity of 18 months.

(ii) *Interest rates on sub-loans* in most cases varied between 5.5 percent and 10 percent, depending on the currency. Sub-loans were provided in both UZ Soums and US Dollars, with the Ministry of Finance assuming the foreign currency risk.

(iii) *Sub-loan Portfolio Sectoral Breakdown.* Initially, the RESP II original credit line financed a wide range of investments in the agricultural sector. For the AF, the government requested that the credit line be only made available for investments in horticulture, which was, and still continues to be today, one of the declared priority agricultural sub-sectors. The sectoral breakdown for combined RESP II and RESP II AF is as follows:

Table 2: Sectoral Breakdown of Sub-loans

Sub-sector/Type of Investment	Share in the Total Amount Financed (%)
Agricultural machinery	30.9
Agro-processing	9.7
Fish farming	0.4
Greenhouses	11.7
Livestock	6.3
Orchards	9.1
Poultry	5.8
Storage/Cold storage	26.2
Total	100

(iv) *Regional breakdown of sub-loans.* The regional breakdown reflects the declared regional priority areas for agriculture and horticulture development. Most of the sub-loans were extended in Andijon, Tashkent and Samarqand Regions:

Table 3: Regional Breakdown of Sub-loans

Region	Number of Sub-loans Financed	Total Amount Financed, US\$ mil equivalent	Amount Financed as a % of Total Credit Line
Andijon	141	10.7	15
Bukhara	59	7.8	11
Ferhgana	57	7	10
Jizzakh	5	0.8	1
Kashkadarya	60	5.7	8
Samarkhand	83	14.7	19
Sirdarya	50	5.9	8
Tashkent	115	20.3	28
Total	570	72.9	100

Table 4: Sub-loans by Category and Year

Category	2009	2010	2011	2012	2013	2014	2015	2016	Total
Livestock		6	36	20	1				63
Processing, storage and packaging of agricultural output	0	0	14	16	2	11	49	17	109
Aviculture		4	12	6	1				23

Horticulture and viticulture		1	12	2		1	20	6	42
Agriculture equipment	49	128	73	25		2	2	1	280
Hothousing		1	1	2		5	26	15	50
Fishery		1		1					2
Miscellaneous				1					1
Total	49	141	148	73	4	19	97	39	570

Component 2. Irrigation and Drainage

Sub-Component 2a: Rehabilitation of Irrigation and Drainage Systems

4. **Inter-farm Systems.** Proposals selected for implementation were packaged under 20 contracts. All the planned works were completed in seven project area *rayons*. These include rehabilitation of: (i) 18 inter-farm canals with total length of about 104.2 km including 185 structures for command area of about 70,030 ha; (ii) 9 collectors with total length of about 86.9 km including 27 structures for service area of about 26,570 ha; and (iii) 10 tube-wells for service area of about 6,720 ha. The aggregate cost of these investments is about UZS 21.1 billion, including VAT (equivalent to approximately US\$ 9.3 million).

5. **On-farm Systems.** Investments were considered for on-farm system improvement in command areas of 23 project area Water Consumers Associations (WCAs). The selected proposals consisted of 30 canal systems and a drainage collectors network packaged under 25 contracts and include rehabilitation of on-farm irrigation network for a command area of over 30,250 ha (156.1 km and 676 structures) and improved drainage network for an area of about 5,950 ha (52.14 km and 11 structures). All the planned works are completed. The aggregate cost of these investments is about UZS 24.6 billion, including value added tax (VAT) (equivalent to approximately US\$ 10.6 million).

6. Total command area that would benefit from the improved I&D infrastructure under the sub-component 2a is over 139,500 ha, exceeding the 91,000 ha identified in the Project Appraisal Document (PAD). The overall actual per hectare investment cost is about US\$143 against US\$255 provided in the PAD. This include some US\$90 per hectare for inter-farm systems and about US\$291 per hectare for on-farm networks.

Sub-Component 2b: Strengthening of WCAs and the capacity to train and strengthen WCAs.

7. The main activities under this sub-component were financed through the SDC parallel financing and include reestablishment of existing WCAs on hydrographic basis and provision of required training in all the aspects of WCAs activities. In total 63 WCAs have been re-organized and established, trained and monitored under the SDC parallel financing. Detailed mapping for each WCA indicating the hydrographic boundaries, land distribution, cropping patterns and irrigation and drainage infrastructure has been developed and inventory of on-farm systems for each WCA has been finalized and assets formally transferred to WCAs balance sheets.

8. All the planned training activities have been undertaken in accordance with the agreed schedule and detailed data are provided in the SDC PCU Final Report. As a result, the WCAs chairpersons and staff supported under the subcomponent have received the basic skills to manage the associations and plan and operate the irrigation systems. The WCAs operate based on operational and financial management plans (OFP), demand based water schedules and O&M plans. The survey conducted by the end of SDC activities revealed general farmers' satisfaction and confirmation of a positive trend as compared with a similar survey in 2011.

9. Planned construction of water control and measurement structures in 6 demonstration WCAs under the SDC financing were completed with good construction quality in general. In particular, the gates are well made and of good quality and the practice of the SDC PCU to contract these gates to specialized metal works companies was also adopted under the Component 2a during the last 2 years.

10. SDC provided seven sets of laser levelling equipment with scrapers and handed them over one per demonstration WCA. An additional eighth set was provided to the Tashkent Institute of Irrigation and Melioration (TIMM). The relevant training for use of these equipment was provided, though not sufficient due to closure of the SDC activities. The project area WCAs were also provided with the sets of computers, generators, software for accounting and water requirements and scheduling as well as other office equipment.

11. SDC also provided 18 cargo bikes for the WCAs which were not provided with maintenance equipment under the IDA funding.

12. Testing of the Management Information System (MIS) developed under the SDC first phase activities and installed at dispatch points in Mirishkor canal in Kashkadarya was completed and the MIS software was updated and adjusted accordingly. The generic MIS package was developed and installed in Dargom and Amu Karakol canals in Pastdargom and Alat *rayons* in March 2015. However, here again there was the question of on-the job training for the relevant responsible staff for at least one irrigation season that was never conducted due to the closure of the SDC component.

13. Under the sub-component, IDA has financed procurement of maintenance machineries for WCAs including 41 three-wheel scooter type mini trucks and 39 tractors with loading bucket, bulldozer and excavator attachments. The provided equipment is operational and fully used by the respective WCAs.

Table 5: Summary of Outputs under Components 2(b)

Outcomes	Outputs
<p>Outcome 1: Capable WCAs All WCAs function in a transparent and efficient manner to the satisfaction of their members. Those WCAs that receive GOU/IDA loans, are able to service the related loans and to operate and maintain the infrastructure and equipment received.</p>	<ul style="list-style-type: none"> ✓ 96 original WUAs have been reorganized in 65 hydrographic WCAs ✓ 65 (from planned 62) WCAs up and running ✓ 50 (from planned 65) WCAs adequately performing O&M (>75% of plan) on-farm systems
<p>Output 1 for Outcome 1 Planning, management and governance functions of 65 WCAs are strengthened (operational and financial management plans, demand based water schedules, O&M plans).</p>	<ul style="list-style-type: none"> ✓ 65 WCAs have operational and financial management plans ✓ 65 WCAs have demand based water schedules ✓ 65 WCAs have O&M plans ✓ Annual WCA General Assembly meetings were held in 2014 by all 65 WCAs ✓ 7% of WCA Council members are women while only 3% of farm managers are women
<p>Activities undertaken</p>	<ul style="list-style-type: none"> ✓ WCAs provided with small tools and equipment such as excavaotors, bulldozers and motorbikes ✓ Construction of water measurement structures at seven Demo WCA completed ✓ Trainings of WCA specialists conducted (legal, financial, O&M, water resources management aspects) : ✓ 29 trainings in 2012 (872 participants), 68 trainings in 2013 (1500 participants), 70 in 2014 (1381 participants), 24 in 2015 (478 participants) ✓ 4231 participants in total

<p>Output 2 for Outcome 1 Efficient and demand oriented water planning and use are introduced in all 65 WCAs</p>	<ul style="list-style-type: none"> ✓ 43 WCAs (as planned) received equipment loans ✓ 37 WCAs of these 43 WCAs (86% of target) conducted at least 75% of planned O&M of on-farm systems, with 50 of 65 total WCAs satisfying this criterion (75% of target achieved)
<p>Output 3 for Outcome 1 Financially viable WCAs are able to perform the necessary O&M tasks to the satisfaction of the farmers.</p>	<ul style="list-style-type: none"> ✓ 75.5 % of farmers fully satisfied ✓ 9.7% increase in satisfied farmers (2014 vs 2011)
<p>Outcome 2: Capable Administrations of Irrigation Systems Designated AIS units and staff are able to independently support the WCAs and perform water management and scheduling tasks in a transparent and efficient manner.</p>	<ul style="list-style-type: none"> ✓ 7 AIS units not established by GoU; however, in lieu of the units, GoU appointed dedicated staff for providing continuous support to WUA members. 18 designated AIS staff re-trained to continue in post-project period
<p>Output 1 and 2 for Outcome 2 Based on GOU initiated institutional changes in AIS, human capacities are improved through training and organizational structures and processes are built up; AIS staff and AIS units increasingly perform the required WCA related functions and tasks in an independent and professional manner</p>	<ul style="list-style-type: none"> ✓ 7 AIS units not established by GoU; however, in lieu of the units, GoU appointed dedicated staff for providing continuous support to WUA members. 18 designated AIS staff re-trained to continue in post-project period
<p>Activities Undertaken</p>	<ul style="list-style-type: none"> ✓ 2 national and 2 international study tours conducted for AIS staff ✓ Two training of trainers (ToT) for AIS WCA specialists : <ul style="list-style-type: none"> • 2 trainings in total • 36 participants in total ✓ 2 manuals for AIS trainers (WCA operations & training materials)

Output 3 for Outcome 2 Hydrographic water management and scheduling models, systems, procedures, and contractual arrangements are developed, tested and introduced in at least two new canals at AIS level.	<ul style="list-style-type: none"> ✓ 1 MIS software developed and installed at dispatch points of Mirishkor canal in Kashkadarya province ✓ Operational testing of 2 MIS at Dargom and Amu Karakol magistral canals is ongoing (Pastdargom and Alat rayons)
Activities Undertaken	<ul style="list-style-type: none"> ✓ 45 AIS staff trained on system operation (3 AIS) ✓ Required equipment provided to AIS “Dargom” and “Amu Karakol”

Sub-Component 2c: Support for improved irrigation and drainage technology

14. As under the Component 2b above, the activities were financed through the SDC parallel financing.

15. In total 62 Farmers Field Schools (FFS), construction of minimum required management structures, provision of necessary materials and equipment for demonstration of simple water saving technologies as well as planned trainings and farmers-to-farmers exchange visits have been organized and successfully undertaken under the SDC parallel financing as per the approved work plan. The SDC PCU also developed a “Manual for trainers of FFS on rational water use” and copies were printed and distributed within the Project area WCAs.

16. Development of 63 digital maps for the 63 project area WCAs have been completed by the ITC. Training of relevant staff from the project area AISs and WCAs for use and updating of maps has been conducted and financed by the SDC. Handover of the maps to WCAs and AISs is completed.

Table 6: Summary of Outputs under Components 2(c)

Result	Output
Outcome 1: On-plot productivity and water usage efficiency improved On-plot productivity and water usage efficiency has improved by dissemination of irrigation and drainage technology packages, water management systems and agronomic production techniques.	<ul style="list-style-type: none"> ✓ 30% of neighboring farmers adopting these technologies
Output 1 for Outcome 1 55 FFS established to demonstrate water saving technologies	<ul style="list-style-type: none"> ✓ 62 FFS are up and running on 751 ha. ✓ water saving technologies introduced at FFS plots and demonstrated

<p>Activities undertaken</p>	<ul style="list-style-type: none"> ✓ Equipment provided: 62 portable weirs, 7 sets of metal forms and gates for outlets, 62 piezometers, 7 soil augers, 5,280 meters of 40 & 50 mm polyethylene pipes, 7 irrigation sets (4 ha), and 4,030 kg (estimated as 65 kg per hectare) black polyethylene film. ✓ 82 water measurement and control structures built at 23 FFS (from planned 22 FFS) ✓ The share of FFS on women-managed plots (6.5%) was twice as much to the number of women farm managers in the project area – 3% ✓ 710 women participated in FFS trainings (3.4% of trainees) ✓ 833 FFS trainings on 5 modules conducted (irrigation technologies, water saving, seasonal activities, etc.): ✓ 20,593 participants trained
<p>Output 2 for Outcome 1 Trained FFS plot operators and designated AIS staff are able to independently continue to provide irrigation related extension advice to farmers.</p>	<ul style="list-style-type: none"> ✓ 62 FFS plot operators (from 55 FFS planned) & 18 designated AIS staff (from 14 planned) are trained as trainers in 5 rounds of FFS trainings
<p>Output 3 for Outcome 1 New irrigation technologies are demonstrated on the RRA demonstration plots.</p>	
<p>Outcome 2: Knowledge and resources shared Expertise, experiences and resources are pooled with RESP II Component 3 RTAS and relevant Swiss project (WRMSP).</p>	<ul style="list-style-type: none"> ✓ Planning has been synchronized and materials shared ✓ Regular cooperation with RTAS on training. ✓ RESP II video prepared (E/U/R – English/Uzbek/Russian) ✓ PCU is same for RESP II and WRMSP
<p>Output 1 for Outcome 2 Regular meetings are held with RTAS as well as with other relevant Swiss projects.</p>	<ul style="list-style-type: none"> ✓ 12 quarterly meetings (from 12 planned) conducted and documented.

Output 2 for Outcome 2 Experiences and expertise and the related extension materials are exchanged, and working plans synchronized as far as possible.	FFS materials disseminated: <ul style="list-style-type: none"> ✓ 10 Brochures ✓ 5 posters ✓ 39 Publications in local newspapers ✓ 6 Calendars ✓ 1 Manual for FFS trainer
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Component 3. Rural Training and Advisory Services (US\$1.96 million)

17. The main outcome from the Rural Training and Advisory Services (RTAS) component was to "Build capacity of the newly independent farmers". Towards this, the component provided demand-driven, tailored training to meet the specific needs of beneficiaries. To ensure high quality and relevance of the training program, evaluation and feedback forms were provided to each participant at the completion of workshops to gauge the usefulness of the training, the quality of the trainers and topics for future sessions. In this context, there was also a high demand for the trainer visit the farmer's establishment in order to provide more detailed and specific technical, or financial, advice.

18. The total number of famers trained was 61,426 compared with the most recent target of 61,000 (set in 2012), an increase of 0.7 percent. Overall, a total of 9,185 female farmers attended the courses, representing 15 percent of attendees. The RTAS staff also liaised closely with Farmers Association (FA) staff at both the regional and HQ levels, and the FA provided significant assistance with the organization of courses and their subject matter as well as training materials and visual aids. In addition, the local FA offices acted as "information centres" at which farmers could learn more about the RTAS component as well as the technical subjects being taught.

Table 7. Information on the trainings conducted

№	Region	Number of seminars	Number of farmers
1	Andijan	133	8 457
2	Bukhara	110	6 426
3	Kashkadarya	144	10 708
4	Samarkand	161	10 482
5	Syrdarya	107	7 362
6	Tashkent	141	8 912
7	Fergana	142	9 079
	Total:	938	61 426

19. On average, 65 people participated in each workshop. Workshops were held on several topics, including, *inter alia*:

- Fundamentals of pest control and diseases of agricultural crops;
- Cotton and grain farming;
- Livestock farming;

- Business plans formation;
- Accounting;
- Processing of agricultural and horticultural products, trade law and tax fundamentals;
- Economics of water resources management and economical use of water resources;
- Fundamentals on pests and crops diseases verification and protection practices (cotton, grain, orchards and vineyards);
- Agro technical activities on choosing cotton and grain varieties and the production of high yields appropriate to land and climatic conditions of project areas;
- Establishing horticulture and vineyards on the basis of modern intensive technologies and the reorganization of the production of high quality products and storage;
- Fundamentals of crops disease and insect control;
- Adaptation of new species and disease control;
- Marketing and the delivery of finished products to local and foreign markets;
- Accounting in agricultural enterprises and its legal basis;
- Business plan development for improved farm enterprises;
- Strengthening economic independence and financial sustainability: the organization of a system of effective farm management;
- The introduction of modern technologies, including a mini-technology, into multi-functional farming activities and the production of competitive products, export opportunities;
- The introduction of modern information and communication technologies in the farms: the automation of accounting and reporting, the use of the Internet;
- The development of horticulture and viticulture: the creation of dwarf and semi-dwarf (intensive) orchards - the cultivation of high-yielding, high quality crops;
- The development of the livestock industry: improving the breed, as well as the quality of veterinary service, strengthening feed supplies;
- Ameliorative land improvement: techniques of efficient water use, the introduction of water-saving technologies in the project regions.

20. Additionally, the Agency for Restructuring of agricultural enterprises (RRA) held training sessions on child and forced labor as well as gender equality issues. Over 17,000 representatives of farming enterprises, as well as representatives of local hokimiyats participated in these workshops.

21. Training of Trainers was also provided to ensure sustainability of the training program under the project. This was undertaken by RRA in cooperation with local experts.

22. The project supported information campaigns through radio, television, and print materials to reach farmers as well as disseminate training materials. 71 campaigns were conducted with the participation of the media, 11 of them on television and radio. 2,500 sets of 8 DVDs (number of training subjects) in each set (i.e. 20,000 DVDs in total) were distributed to dekhan farmers and other non-attendees.

23. The number of farmers adopting what they have learned was surveyed at 100 percent- all farmers were adopting at least one of the technologies that they were trained in.

Annex 3 Economic and Financial Analysis

Appraisal assumptions

1. **Method of the original project.** The EFA at appraisal stage of the RESP-II included the following: an assessment of: (a) the financial viability of the project for farmers and agribusinesses in terms of incremental gross margin, net margin and financial net present value (FNPV) of their investments; (b) the economic viability of the project in terms of economic net present value (ENPV), and economic internal rate of return (EIRR) - this is assessed for components 1 and 2 separately; and (c) cost recovery and sustainability issues, specifically the ability of WUAs to finance incremental recurrent costs and repayment a percentage of rehabilitation costs; (d) the fiscal impact on government. The analysis compares the without-project scenario and with-project scenario and estimates incremental costs and benefits over a 25-year period using a 12 percent discount rate.

2. **Component 1. Rural Enterprise Finance.** The financial analysis estimates the incremental net benefits to recipients from their investment financed under the credit line. As example investment in a harvester is used, which can yield net incremental benefits resulting in a financial NPV of US\$107.8 million for the entire component or US\$5 per 1 USD investment. The economic analysis results in an economic NPV of US\$3.9 million or US\$0.18 per 1 USD investment. Regarding the fiscal impact on government, the analysis assumes that the PFI lent at an interest rate of LIBOR +0.5%-1% in USD and 12-14% in local currency; the funds were repaid in 15 installments after a 5-year grace period.

3. **Component 2 and 3. Irrigation and Drainage and Rural Training and Advisory Services.** The analysis assumed rehabilitation of irrigation and drainage infrastructure on 90,000 ha (14,000 ha in PY1, 32,000 ha in PY2, 29,000 ha in PY3, 13,000 ha on PY4 and 2,000 ha in PY5) with a lifetime of 25 years. Annual incremental benefits start to accumulate in PY3 and reach 100% in PY8. A model farm is assumed with: 9.6 ha of wheat, 12.9 ha of cotton and 1.6 ha of other crops, and an aggregated cropping pattern of: 54 percent cotton, 40 percent wheat, 4 percent maize, 0.8 percent melon and gourds, 1.4 percent orchards and 0.4 percent vineyards. It is assumed that cropping patterns remain constant in the without and with project scenario. Yield increase of 20 percent was assumed for major crops, for orchards and vineyards 5 percent, and it was assumed these benefits accrue on 70 percent of the irrigated project area. The analysis takes into account that farmers receive training and advisory services.

4. The ex-ante economic analysis finds (a) financial feasibility for farmers can be expected. Farmers have an incremental increase in gross margins of US\$108 per hectare irrigated land; aggregated over the project areas, this results in a FNPV of US\$43 million or US\$48 per hectare; (b) the ENPV is US\$23.4 or US\$260 per hectare, with an Internal Rate of Return (IRR) of 24 percent. Sensitivity analyses demonstrated the high sensitivity to decreasing crop prices. (c) The analysis found that fees of Water User Associations needed to be increased by 212 percent to 25,300 Soum/ha, to cover annual maintenance cost and operating cost.

5. **Method of the AF.** The economic analysis of the AF refers to the same assumptions as the original project for component 2 and 3 and focuses solely on the Rural Enterprise Finance Component. It takes into account different enterprises under the credit line, i.e. farm machinery, processing and irrigation equipment and storage facilities, crop and livestock production and services and non-agricultural activities. Disbursement was assumed 3 years. The financial analysis resulted in a NPV of US\$20 million and IRR of 21 percent. The incremental return to investment was found to range between US\$0.40 and US\$0.45. The economic NPV was US\$18 million and economic IRR of 19 percent. Sensitivity analyses showed that results were moderately sensitive to changes in all variable sand particularly to a delay in project benefits of 2 years which lead to a decline in the economic IRR to 14 percent.

ICR analysis: profitability

6. The analysis will assess the financial viability of the investment for beneficiaries under component 1 and 2. The data was made available by the PIU and from a recently conducted Impact Assessment.⁸

7. **The cropping pattern in the project districts⁹ did not change dramatically between 2008 and 2015:** The area under cotton production decreased by ca. 7 percent in the project districts, under vineyards increased by 30 percent in the project districts; in contrast, the areas under melons decreased on average in target districts. Other crops gained in hectare area, of which rice, fruits and berries and potatoes showed the largest increases. The assumptions at appraisal stage were quite representative, except that horticulture crops (e.g. potatoes, vegetables, fruit and berries) were not accounted for even though horticulture already constituted approximately 15 percent of the cropping area in 2008.

8. The trends in the project districts are in line with observations on national level. The increase in wheat and decrease in cotton area is consistent with trends since 1980 (Figure 1.a). On national scale it was suggested that the decreases in cotton cropping area supplied about half the increase in area under wheat. Another notable change in the cropping patterns in Uzbekistan is the pronounced increase of area under horticulture crops (vegetables, potatoes and melons), which is associated with the growing land endowment in smallholder plots where labor intensive vegetables are the ideal choice for labor-rich rural families as both subsistence and cash crops. As these high value crops are exempt from state orders they constitute an important source of income.¹⁰ Changes in the project areas reflect the aim of

⁸ "Expert Info" LLC for Rural Restructuring Agency: Impact assessment report for the "Rural enterprises support project. Phase –II" with participation of IDA. December 2016

⁹ The Impact Assessment report provides information about regions and districts where project intervention areas are located. I&D rehabilitation interventions were undertaken (135,000 ha) while the entire area of all seven districts (approximately 258,000 ha).

¹⁰ Lerman, Z., Sedik, D., Yuspov, Y., Stanchin, I., Kazakevich, I (2016): Wheat production and regional food security in CIS: The case of Belarus, Turkmenistan, and Uzbekistan. FAP regional Office for Europe and Central Asia. Policy Studies on Rural Transition No. 2016-1

GoU's structural agricultural reforms to reduce cotton production area by approximately 10 percent in 2020.¹¹

9. **Average crop yields have increased**, across crops and districts as a results of the project. However, changes in crop yield vary notably between crop (Table 1). Yield increases notably for rice, fruits and berries and vineyards and melon, while wheat, cotton and vegetables showed moderate increases or even a decline, as in the case of corn.¹² During appraisal, yield increases of 20 percent were assumed for wheat, cotton, maize for silage and melon and gourds, which reflected the project target value in the results framework. For orchards and vineyard, yield increases are assumed at 5 percent. The actual weighted yield increase of 12 percent did not meet the expectations at appraisal stage, except for rice, melon, fruits and berries and vineyards which exceeded the assumptions. It should be noted that these values only capture changes between single years and for entire target districts, not specifically the targeted project intervention area. Previous experience from RESP I showed relatively low yield increases, with 15 percent for cotton and potatoes, 23 percent for corn, fruits and vegetables and 27 percent for wheat.¹³ A comparison with national trends, shows that wheat yield increased from 1 ton/ha in 1980 to 5 t/ha in 2012, and cotton yields ranged between 2 t/ha in 1980 to 2.6 t/ha in 2012 (Figure 1.b). In the project districts, average crop yields are slightly above the national average (in 2012).

Table 1 Changes in cropping patterns during project implementation and assumptions at appraisal stage, changes in crop yields per hectare; average across districts

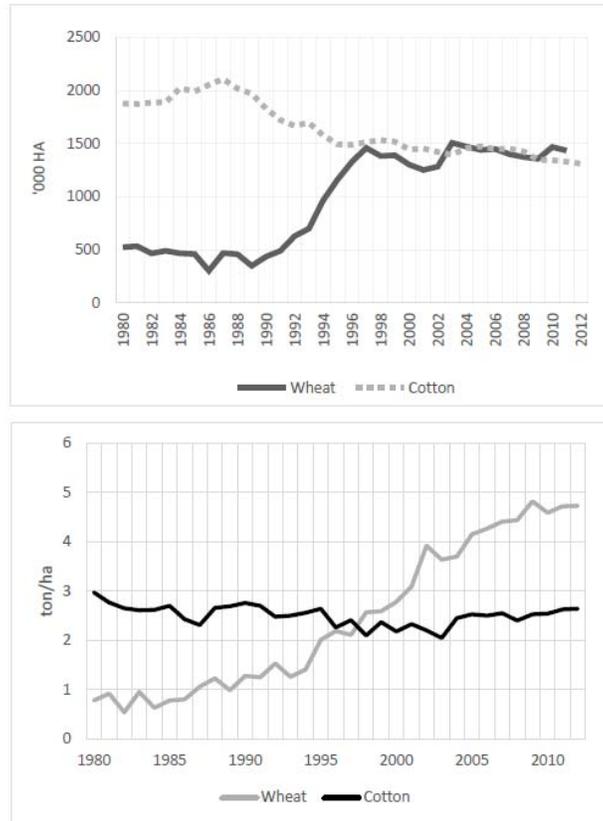
	AVERAGE ACROSS PROJECT DISTRICTS					Cropping patterns Appraisal	AVERAGE ACROSS PROJECT DISTRICTS		
	2008	Share	2015	Share	Change 2008 - 2015		2008	2015	Change 2008-2015
	ha	%	ha	%	%	%	t/ha	t/ha	%
Wheat	89,462	40%	93,158	42%	4%	40%	5.0	5.4	8%
Corn	1,719	1%	1,919	1%	12%	4%	6.2	5.2	-16%
Rice	767	0%	1,857	1%	142%	0%	1.4	2.9	106%
Cotton	110,978	50%	102,769	46%	-7%	54%	2.4	2.6	9%
Potato	2,411	1%	3,900	2%	62%	0%	24.1	21.6	-10%
Vegetables	4,774	2%	6,556	3%	37%	0%	26.8	27.1	1%
Melons	2,217	0.51%	2,008	0.46%	-9%	0.8%	19.3	25.3	31%
Total crops	212,328		212,167		0%		7.7	13.7	78%
Fruits, berries	6,757	3%	7,498	3%	11%	0%	7.2	15.1	108%
Vineyards	2,424	1%	3,143	1%	30%	0.4%	11.1	13.2	35%
Orchards						1.4%			
Total	221,509	100%	222,808	100%		100%			

Figure 1.a. National trends - area under wheat and cotton ('000 ha); Figure 1.b. wheat and cotton yields, 1980-2012 (ton/ha)

¹¹ USDA Foreign Agricultural Services. Global Agricultural Information Network (April 2016): Republic of Uzbekistan. Cotton and Products Annual Report.

¹² The average decline in corn yields was driven particularly by yields in Ulungar which showed decline of 70 percent.

¹³ Implementation completion and results report ICRD-46440 JPN-53128 "Uzbekistan -Rural Enterprise Support Project"



Source: FAO (2016), citing official statistical yearbooks (various years).

10. **Financial analysis of component 2. Irrigation and drainage and RTAS.** To assess the financial profitability of intervention under component 2, several representative crop budgets were provided by the RRA for the years 2011 and 2015 for cotton, wheat and melon. The average over the region Fergana, Andijan, Tashkent, Syrdarya, Djizzak and Bukhara, Kashkadary, Samarkand is presented. The ex-ante analysis reported a gross margin¹⁴ of US\$108 per hectare irrigated land.¹⁵ The ex-post analysis shows (Table 2) that for grains, an annual net revenue of US\$411 could be achieved, translating in an incremental annual net revenue of US\$52 per hectare compared to a without project scenario. Melon production seems more profitable than grains production. The share of incremental net revenue in total annual revenue (87 percent, compared to 13 percent and 11 percent for cotton and wheat) indicates a high positive impact of the project on horticulture production. Table 2 reports the resulting per hectare values and value for a 24 ha model farm, as assumed in the ex-ante analysis.¹⁶ Under these assumptions, the annual net incremental revenue is US\$246 per

¹⁴Gross margin usually refers to total sales revenue minus its cost of goods sold (COGS), divided by total sales revenue, expressed as a percentage. The EFA at appraisal stage refers to gross margin in USD/ha. This may indicate that alternative definition was used. Without additional information the indicator cannot be replicated in the same way as appraisal stage.

¹⁵ The ex-ante economic analysis assumed that a standard farm produced 9.6 ha wheat, 12.9 ha cotton and 1.6 other crops.

hectare, or US\$48 for cotton and wheat. These indicators demonstrate the average financial profitability of project participation for farmers.

Table 2. Financial feasibility for farmers – irrigation and drainage components

	Per hectare			Model farm 24.1 ha	
	Cotton	Wheat	Melon	Total	Per hectare
With project - Operating cost (US\$)	524	583	372	12,957	538
With project - Labor cost (US\$)	81	11	68	1,257	52
With project - Total cost (US\$)	605	594	440	14,214	590
With project - Gross revenue (US\$)	1,056	966	3,843	29,045	1,205
With project - Annual Net revenue (US\$)	451	372	3,403	14,831	615
Annual Net incremental benefits (US\$)	59	42	2,974	5,923	246
NPV (25 years, 12 percent) (US\$)	543	488	29,598	59,049	2,450
Benefit-Cost Ratio	1.7	1.6	9.4		

11. To aggregate the financial accounts, following assumptions are used: as observed in the project area 42 percent are assumed under wheat cropping, 46 percent under cotton and 0.46 percent under melon production, which covers approximately 90 percent of total cropping area. The ex-ante analysis assumed an adoption rate of 70 percent, which is used for the ICR analysis, and benefits starting in year 3 and gradually increasing to 100 percent in year 8. While the ex-ante analysis focused on 90,000 ha, the project actually rehabilitated 113,471 ha of irrigated land. The analysis uses project cost of US\$26.38 million for component 2 (IDA and SDC) plus US\$1.6 million for component 3, phased according to actual disbursement of cost.¹⁷ It is assumed that activities under component 3 contributed to the enhanced agricultural performance. As during appraisal, a period of 25 years and discount rate of 12 percent are used. The current official exchange rate of Sum-US\$ of 3,790 was applied.

12. The results (Table 3) show an FNPV of incremental net benefits of US\$9.9 million, an IRR of 25 percent and NPV per hectare of US\$109. The strong increase in melon yield, even though area under melon is quite small, outweighs the fact that smaller yield increases were observed for other crops under project implementation than as assumed during appraisal. If area under melon is assumed to decrease to 0 hectares, the FNPV reduced to US\$4.26 million and IRR to 18 percent.

Table 3. Aggregated financial feasibility for farmers – irrigation and drainage components; ex-ante and ex-post results.

	Appraisal analysis, 90,000 ha	Completion analysis 113,371 ha		
		Base values	-20% adoption	-30% adoption
FNPV (US\$)	4,3 million (exchange rate 1,300 soum)	9.9 million	5.08 million	2.6 million
IRR (%)	-	25%	19%	15%

¹⁷ Information from G. Ratings of Project Performance in ISRs; no disbursement by component was available.

NPV/ha (US\$)	48	109	69	41
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Note: Exchange rate at appraisal was Soum-US\$ 1,300, at completion Soum-US\$ of 3,790

13. **Financial feasibility of component 1. Rural Enterprise Finance.** The average sub-loan amount per enterprises was US\$126,000. Table 4 shows the average value of sub-loans by category. Under the original project ca 49 percent of loans were in USD. Repayment period in the project area was 5 years and only about 2 years in non-project areas, as little long-term credits are available in rural areas. For several orchards enterprises the sub-loan repayment period was extended to 10 years due the slow onset of benefits. Comparing the ex-ante business plan of 12 enterprises with current achievement, for the first two years, the retained average net profit¹⁸ of the representative enterprises exceeded expectations on average by 35 percent for cold storage, by 145 percent for greenhouses, and decreased by 284 percent for orchards, thus on average 155 percent. Comparing the expectation of annual net profit per US\$ invested, the ex-ante expectations ranged from US\$0.02 for orchards to US\$0.3 for greenhouse and US\$0.16 for cold storage and were exceeded by 56 percent for cold storage, 163 percent for greenhouses and 171 percent for orchards.

Table 4. Number of sub-loans and average funding by loan category

Funding	Number of loans	Average loan amount by category	TOTAL
Number of sub-loans, total	570		
Overall total loan/leasing (in thousand USD)		71,902.18	
Average loan amount (in thousand USD)		126.14	
including:			
- agriculture equipment	280	78.16	30.8%
- livestock	63	67.38	6.2%
- aviculture	23	185.67	5.4%
- fishery	2	126.81	0.40%
- horticulture and viticulture	42	155.23	9.1%
- hothousing	50	156.59	12.1%
- processing, storage and packaging of agricultural output	109	248.02	36%
- miscellaneous	1	31.35	0.10%

14. For the financial analysis, the financial profitability of 14 enterprises financed under the credit line, in the categories greenhouses, orchards, cold storage and agricultural machinery was received from the PFIs via the RRA. For the available sample, the average loan amount is US\$557,243 and thus exceeds the average amount in the entire sample. Information is available for four categories: agricultural equipment, which constitutes 31 percent of sub-loans; hothousing which constitutes 12 percent, horticulture and vegetable 9 percent which constitutes, and processing and storage 36 percent of loans, resulting in 502 enterprises or 88 percent of all enterprises. The average net profit of the cold storage enterprises is US\$218,000; of the greenhouse US\$250,000, and of orchards enterprise

¹⁸ After tax, interest payments and operational cost (wages, utilities, insurance). The required values were available for 12 out of 14 enterprises.

US\$178,000 and agricultural machinery US\$3,500. Total cost of US\$72.13 million are considered, and phasing according to the share of loans that were approved each year. Benefits are considered from year 4 onwards and take into account the phasing of loans. The economic lifetime is assumed at 25 year period and 12 percent discount rate.

15. Results show a FNPV of US\$389 million and an IRR of 73 percent. The return (in net profits discounted over 25 years) to one dollar invested is US\$10 (Table 5). During the appraisal analysis, a return on US\$1 invested of US\$5 was assumed, and an NPV of US\$102 million. It should be noted that the current sample consists of enterprises which may be larger than average.

Table 5. Aggregated financial feasibility – rural finance component ex-ante and ex-post results

Assumptions:	Appraisal analysis, original project	Completion analysis		
		Base values	-20% net profit	-50% net profits
FNPV (US\$)	102	389 million	302 million	170 million
FIRR (%)	-	73%	64 %	47%
Return per one US\$ invested	5	10	8	5

ICR analysis: internal rate of return

16. **Economic feasibility of component 2. Irrigation and drainage and RTAS.** The economic feasibility of component 2 was assessed and financial cost, including project cost, converted to economic cost. For cotton this was based on the export parity price and for wheat on the import parity price. For other goods the domestic market prices was assumed. Results (Table 6) show that the economic ENPV and EIRR are positive but below expectations at appraisal stage.¹⁹ If the hectare area under melon is assumed zero, the ENPV reduces to US\$6.3 million and an EIRR of 23 percent.

Table 6. Aggregated economic feasibility – irrigation and drainage components; ex-ante and ex-post results

Assumptions:	Completion analysis 113,371 ha

¹⁹ It should be noted that due to lack of detailed information, the conversion to efficiency prices could not be replicated from the appraisal stage analysis. Information was taken from a study by USDA; MacDonald, D. (2012): Economic policy and cotton in Uzbekistan. CWS-12h-01. A report from the economic research service. Uzbekistan regulates its export prices and determines a state procurement price (SPP), which is set in view of the government’s exchange rate policies. The approach to derive the export parity price is based on a comparison of the ratio of the SPP to world prices against the comparable ratio—prices received relative to world prices—for U.S. farmers. Local farm prices for Uzbek farmers compared to world price ranged around 60 percent in 2008 and dropped to approximately 28 percent in 2012. A recent assessment, USAID, FEWS NET (2011): A regional view of the wheat market and food security in Central Asia, on import parity pricing in Central Asia found that based on available data, the level of market integration between the major wheat markets in the Central Asia region appears to be relatively good. The difference between pricing seems a function of marketing a transportation cost. The price differential was found on average 40 percent. A rural shadow wage was 0.6 assumed and to convert economic cost a conversion factor of 0.9 is used as in recent project.

	Appraisal analysis, original project	Base values	-20% adoption	-30% adoption
ENPV (US\$)	23 million	11 million	7 million	4.9 million
EIRR (%)	24%	32%	25%	21%
ENPV/ha (US\$)	260	125	97	77

17. **Economic feasibility of component 1. Rural Enterprise Finance.** To assess the economic viability of Component 1, the beneficiaries' contributions to the sub-loans are included, which is about 40 percent of total amount of sub-loans disbursed. This leads to a ENPV of US\$343 and ERR of 47 percent and net profits, discounted over 25 years, of US\$7 per one US\$ invested (Table 7). In contrast, the appraisal stage analysis found a ENPV of 3.8 million, an EIRR of 20 percent and US\$0.18 per dollar invested. Similarly, for the AF, the ENPV was US\$18 million and EIRR of 19 percent

Table 7. Aggregated financial feasibility – rural finance component ex-ante and ex-post results

Assumptions:	Appraisal analysis, original project	Completion analysis		
		Base values	-20% net profit	-50% net profits
ENPV (US\$)	3.8	343 million	256 million	124 million
EIRR (%)	20 %	47%	40 %	28%
Return per one US\$ invested (a)	0.18	7	55	3

Note: (a) for the analysis at completion the sum of discounted benefits over 25 years is assumed. Detailed information for appraisal stage wasn't available.

Conclusion:

18. The economic and financial analysis at project completion shows that selected agricultural enterprises participating under Component 1 achieved a higher net profitability, compared to their ex-ante expectations as shown in their business plans. The economic analysis of Component 1 demonstrates a high ENPV of US\$343 million and EIRR of 47 percent, thus exceeding the expectations at project appraisal stage. The economic analysis of Component 2 takes into account hectare area under irrigation rehabilitation, changed cropping patterns and yield increases, as a result of project's investment, and shows that the project's investment led to an ERR of 32percent, an ENPV of US\$11 million or an ENPV/hectare of US\$125. The completion analysis demonstrates that the project has achieved financial and economic impacts, under the assumptions that the observed adoption and resulting benefits are sustained for approximately 20 years. The results are robust when changes in adoption rates and net profits are assumed.

Annex 4

Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit
Janis D. Bernstein	Consultant	GSU03
Sandra Broka	Senior Agriculture Economist	GFA03
Maurizio Guadagni	Sr Agricultural Spec.	GFA04
Naushad A. Khan	Consultant	GGO03
Dilshod Khidirov	Sr Agricultural Spec.	GFA03
Pieter David Meerbach	Sr Water Resources Spec.	GWA09
John Otieno Ogallo	Sr Financial Management Specialist	OPSPF
Fasliddin Rakhimov	Procurement Specialist	GGO03
Janna Ryssakova	Social Development Specialist	ECSSO - HIS
Galina Alagardova	Sr Financial Management Specialist	GGO21
Janis D. Bernstein	Consultant	GSU03
Sandra Broka	Senior Agriculture Economist	GFA03
Oydin Dyusebaeva	Program Assistant	ECCUZ
Ama Esson	Program Assistant	GFA03
Pieter David Meerbach	Sr Water Resources Specialist	GWA09
John Otieno Ogallo	Sr Financial Management Specialist	OPSPF
Fasliddin Rakhimov	Procurement Specialist	GGO03
Sari K. Soderstrom	Director	GSURR
Nikolai Soubbotin	Lead Counsel	LEGLE
IJsbrand Harko de Jong	Lead Irrigation Specialist	GWA06

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY08	48.88	129,199.97
FY09	1.04	3,042.88
Total:	216.22	443,219.32
Supervision/ICR		
FY09	27.12	36,635.83
FY10	43.32	65,103.30
FY11	35.87	56,328.87
FY12	23.24	51,867.37
FY13	21.48	46,451.57
FY14	14.27	30,590.94
FY15	17.56	47,646.45
FY16	19.65	61,589.08
FY17	13.71	47,005.91
Total:	266.14	576,254.17

Annex 5 Beneficiary Survey Results

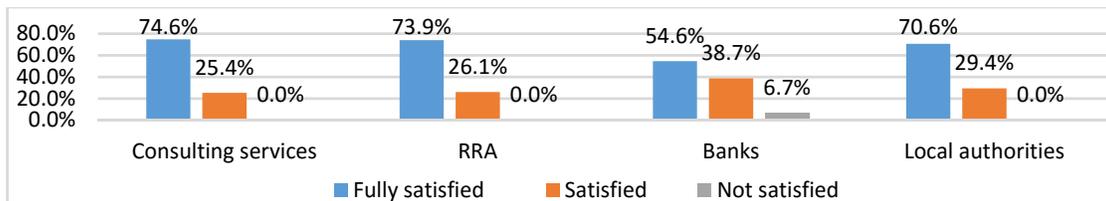
1. A field research was carried out as a part of an impact assessment of the project. The survey was conducted by components. This annex presents summary of the results of the research.

Component 1. Rural Enterprise Finance

2. 119 farmers and agricultural enterprises who received loans under the component were surveyed. 50 percent of them specialized in horticulture, and the others in cotton and grain, livestock, and others. 95 percent of creditors are confident that the project loan contributed to the establishment and development of sustainable business linkages between the recipient and the other beneficiaries. 86.6 percent of creditors are willing to borrow for new investments. 25 percent responded that the credit will improve their economic condition, while 53 percent of respondents estimate an average improvement in their economic situation.

3. 96 percent of borrowers were satisfied with the loan conditions and loan amount provided by the Participating Financial Institutions (PFIs). Regarding access to the credit line, a series of informational workshops, meetings and seminars were carried out. 65.7 percent of respondents were directly involved in trainings conducted by Rural Restructuring Agency (RRA). 43.7 percent of respondents evaluated the organization of training as "very good", and 33.6 percent as "good". For the compilation of application package, 59.7 percent of respondents used the consulting services of the agency for the formation of business plans. Figure 1 shows satisfaction level with service.

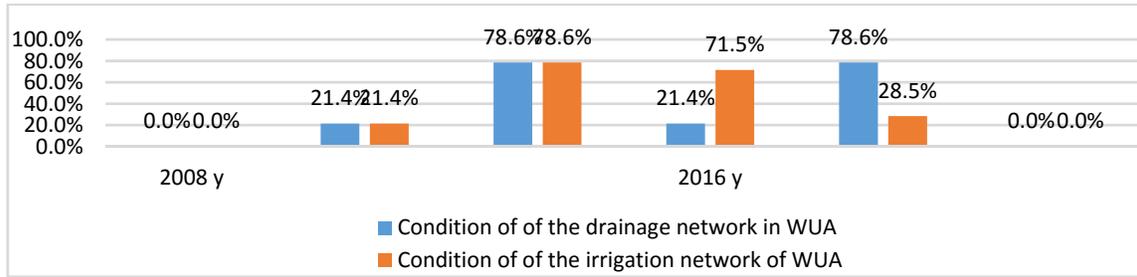
Figure 1: Satisfaction with service organizations



Component 2. Irrigation and Drainage (I&D)

4. Two types of research were conducted: a comparative analysis between 2016 and 2010 which shows changes made by the component activity; and survey of 70 average size farms and 70 dekhkan farms that are WUA members to assess changes with I&D improvement. In 2010, the I&D network in WUAs were not in a satisfactory condition. The majority of respondents believe that their condition has improved. (See Figure 2)

Figure 2: State of I&D networks in WUA

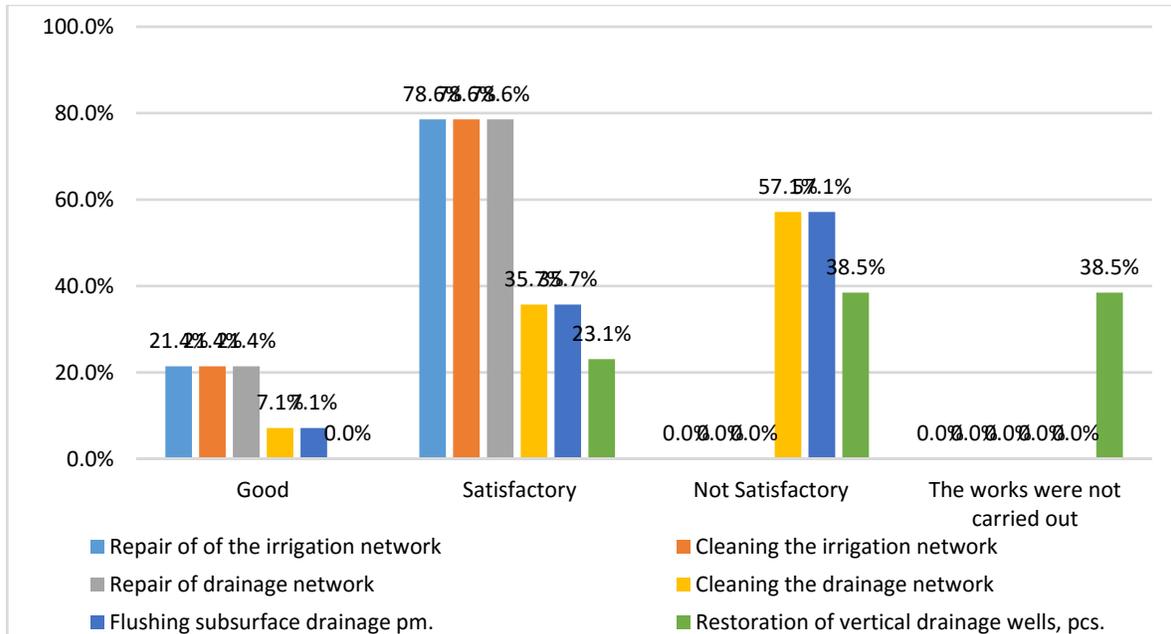


5. According to the survey of WUA workers, the loss of water during transportation was 15 percent in 2016 against 23.7 percent in 2010. The heads of local government and management interfere less in the activities of the WUA, their number was reduced, on average, from 57 in 2010 to 25 in 2016

6. By 2016, all of the WUAs have water consumption plans, soil plans, map of soil salinity levels, groundwater level maps and maps on groundwater salinity. The level of saline lands decreased from 18 percent in 2010 to 13 percent in 2016.

7. In general, respondents are satisfied with the quality of hydro-amelioration work. There are more respondents that are not satisfied with carrying out cleaning of drainage network, carrying out washing and work on the restoration of drainage wells. (See Figures 3)

Figure 3: Evaluation of the quality of the irrigation and drainage works



8. All of the WUAs believe that the situation of the WUA water availability improved due to the project. Information to farmers about the new irrigation technologies has improved. The situation of dispute resolution, conflict over water has been improved. Also, the situation with the theft of water has reduced. Positive shifts can be observed in matters

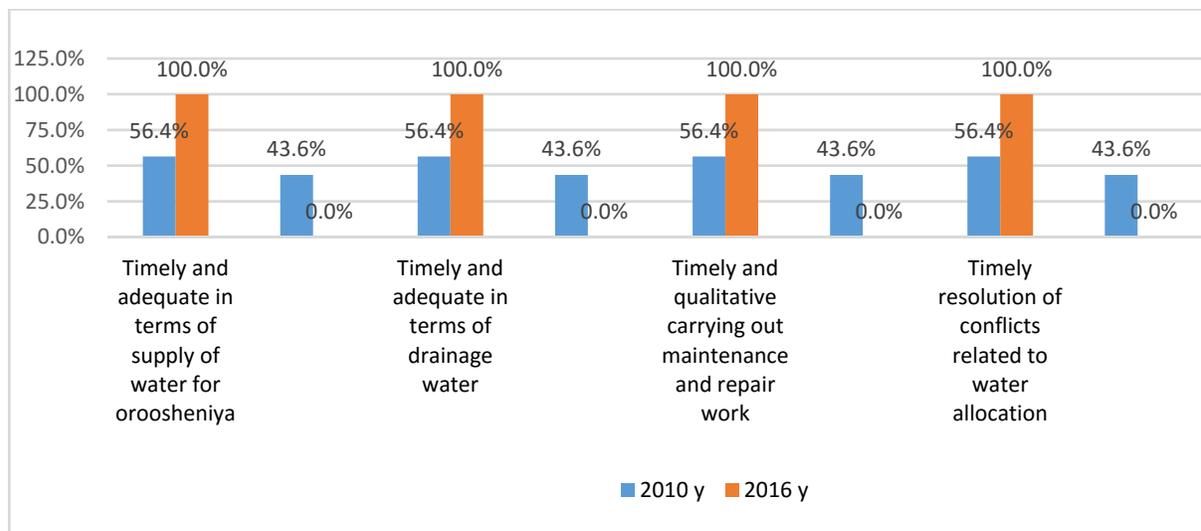
of provision and on time irrigation water delivery, irrigation compliance order. All this has helped to improve the condition of I&D networks.

9. Water consumers increasingly use the services of the WUAs. In 2010, 53.6 percent of participants had a contract for the water supply with WUA, while in 2016, all participants had such contracts. 100 percent of the respondents in 2016 understood the role of WUAs in matters of water delivery, while in 2010, 56.4 percent knew about the role of WUAs in water delivery.

10. 99.3 percent of the heads of farmers acknowledge the improvement of ameliorative lands after project implementation. The degree of satisfaction with WUA services also increased from 56.4 percent in 2010 to 100 percent in 2016.

11. Results of evaluation regarding on-time and adequacy of water volume delivery and improvement of drainage, on-time repair and renewal activities, as well as the on-time resolution of conflicts related to water allocation is presented in the Figure 4.

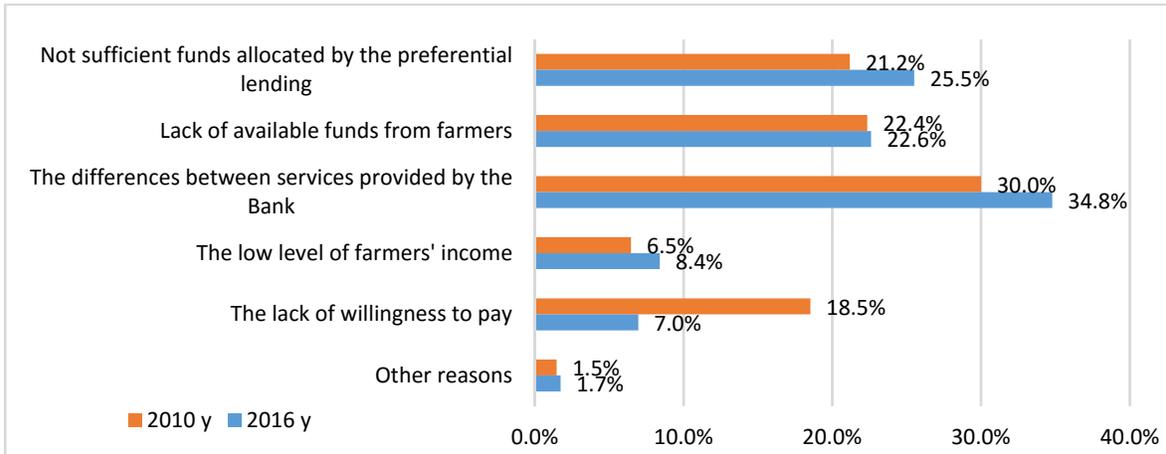
Figure 4: Compliance and sufficient volume of drainage water removal.



12. 100 percent of respondents believe that currently WUAs employ enough specialists to perform maintenance work and the availability of a sufficient number of staff. In 2010, this number was 56.4 percent.

13. However, there are issues to be resolved, primarily linked to the financial sustainability of the WUA. This is due to low WUA service payments made by water consumers. The main reasons are provided in Figure 5 below.

Figure 5: Reasons for non-payment of WUA services.

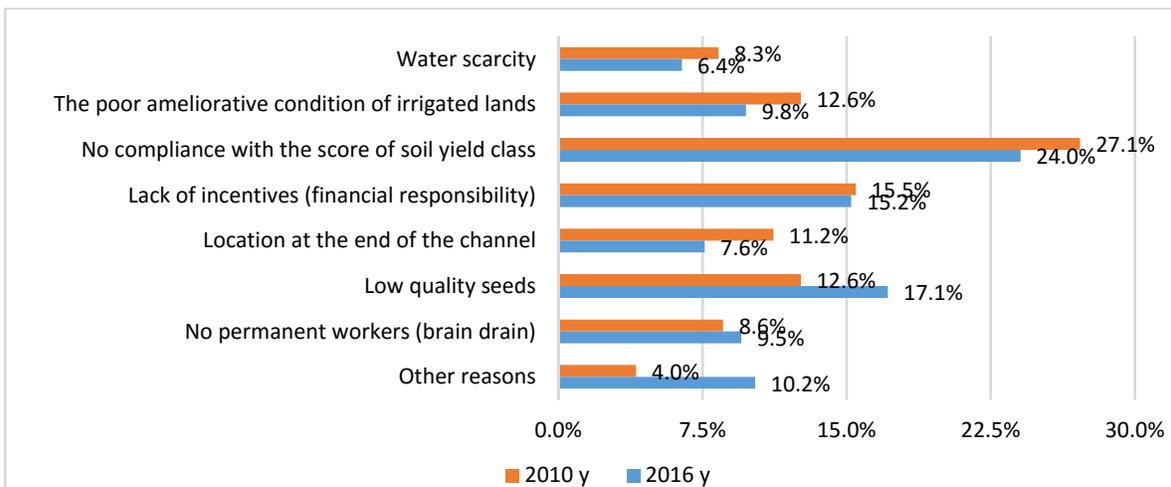


14. In 2016, all respondents believe that the tariffs for WUA services calculated reasonably and correctly. In 2010, respondents also considered rates to be reasonable but they received the information on the amount of the tariffs from other farmers.

15. Awareness among farmers of the existence of Farmers Field Schools (FFS) in their area was 100 percent. 96.4 percent of respondents were satisfied with the training provided in the FFS. 94.3 percent of the participants believe that the demonstrations and water management technologies and training in other advanced technologies provided at the FFS were useful. 96.4 percent of respondents are convinced that the implementation of the acquired skills will improve the soil fertility in farms and dehkhan farms.

16. Regarding the general causes of low profitability of farms in Uzbekistan, respondents ranked them as follows: (See Figure 6)

Figure 6: The reasons for low farm profitability



17. All respondents participated in the trainings, conducted by experts and project consultants RESP-2, and also took part in the trainings conducted by the other organizers, and projects. They believe that all the trainings were helpful and mostly useful for the WUA

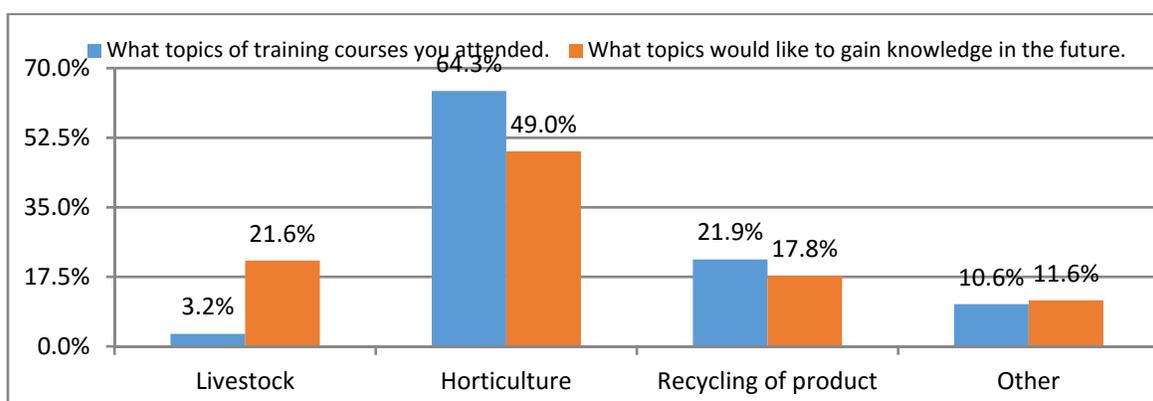
activity improvement. The subjects of the seminar were decided taking into account stakeholders' views. The prepared manuals and training materials contain all the necessary information for the further development of the WUA activities.

Component 3. Rural Training and Advisory Services

18. A survey was conducted on 90 farms. Out of 90 farms, 64.3 percent of respondents participated in training on horticulture, 21.9 percent of respondents on the processing of agricultural products, 10.6 percent on other issues, and 3.2 percent of the respondents on livestock issues.

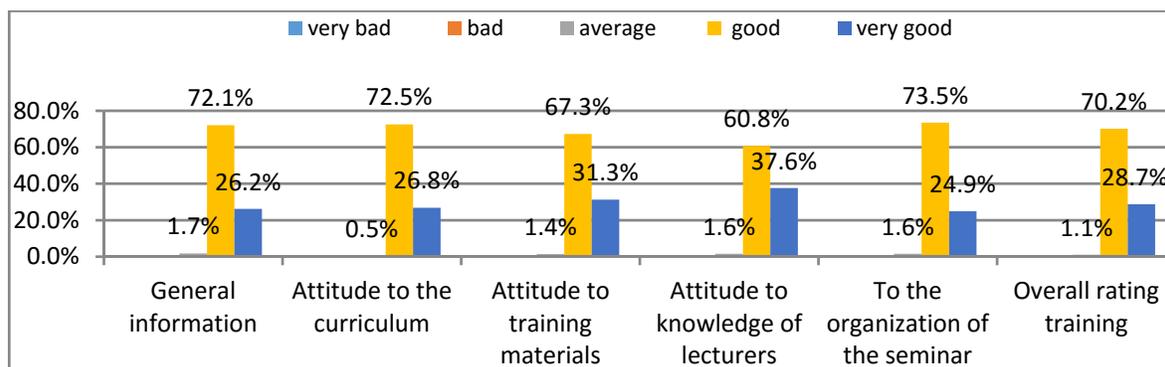
19. The respondents expressed interest in additional workshops. (See Figure 7)

Figure 7: Training courses direction and the number of participants.



20. The survey respondents gave their assessment on conducted trainings on the following parameters: general information; relationship to the curriculum; the attitude to learning materials; attitude to knowledge of lecturers; attitude to the organization of the workshop; and overall training. The evaluation results are shown in the Figure 8. Overall, 98.7 percent of respondents gave a rating of "good" and "very good".

Figure 8: Evaluation of trainings.



21. 73 percent of respondents fully use their experience and knowledge in their daily work and 26 percent use it partially. 84 percent of respondents believe that such seminars/training should be provided by other organizations and projects vis-à-vis public authorities, WUA or Council of Farmers as donors were able to leverage highly qualified

technical experts to provide detailed and comprehensive training in advanced innovative technologies.

Annex 6 Stakeholder Workshop Report and Results (if any)

N/A

Annex 7 Summary of Borrower's ICR and/or Comments on Draft ICR

The ICR was shared with the Borrower. The Borrower endorsed the findings of the ICR and had no additional comments.

Below is the translated version of the letter received from the Borrower.

MINISTRY OF AGRICULTURE AND WATER RESOURCES REPUBLIC OF UZBEKISTAN

No. 07/34-357
21.06.2017

Mr. Hideki Mori
Country Manager
for Uzbekistan
World Bank

Dear Mr. Hideki Mori,

First of all let me to express the gratitude for the World Bank's contribution in agriculture development in the Republic of Uzbekistan.

As you are aware, the Rural Enterprise Support Project Phase II (RESP-II) had been successfully completed on December 31, 2016. All project implementation goals were achieved, and the certain results indicators were significantly over fulfilled.

Based on the RESP-II implementation experience, there was developed and is being implemented the Horticulture Development Project in the Republic of Uzbekistan, as well as the Livestock Sector Development Project is under the preparation.

Ministry of Agriculture and Water Resources of the Republic of Uzbekistan has reviewed the draft Implementation Completion and Results Report of the RESP-II, and informs that it has neither comments nor suggestions on this draft Report.

Ministry of Agriculture and Water Resources of the Republic of Uzbekistan takes this opportunity to renew the assurances of its highest consideration to you.

Deputy Minister

/signed/

O.Mustafayev

Annex 8 Comments of Cofinanciers and Other Partners/Stakeholders

The ICR was shared with the Swiss Agency for Development and Cooperation (SDC) that provided parallel financing for implementation of activities under Components 2(b) and 2(c). SDC expressed its satisfaction with the assessment of project performance as indicated in the ICR and provided no additional comments.

Annex 9 List of Supporting Documents

1. Project Appraisal Document
2. Financing Agreement
3. Additional Financing Project Paper
4. Additional Financing Legal Agreement
5. Country Partnership Framework
6. Mission Aide Memoires
7. Implementation and Status Results Report (ISRs)
8. RESP-I ICR
9. RESP II Project End-of-Project Impact Assessment
10. Background Paper Series – Uzbekistan Vision 30: Strengthening the Horticulture Value Chain
11. Swiss Agency for Development and Cooperation Final Report on Irrigation and Drainage Component – July 2015

Annex 10

Project Response to Inspection Panel Case on Child and Forced Labor in Cotton

In accordance with Bank Management response and recommendations of the Inspection Panel, several additional steps were undertaken to safeguard against support for child and forced labor. These included:

- (i) All relevant RESP II project documents were amended to comply with the applicable national and international laws and regulations against forced labor, in addition to child labor. These included: (a) Rural Enterprise Investment Regulations; (b) the Subsidiary Loan Agreement with Participating Financial Institutions (PFI); (c) the Project Implementation Plan; and (d) the PFI sub-loan agreements; all PFIs applications were checked for compliance;
- (ii) Farmer training modules were revised and expanded to include training and information sessions on forced labor laws and regulations in addition to child labor. Several workshops were conducted in all project regions and each workshop included a session on international standards and national legislation, related to Child and Forced Adult Labor (in 2015, such trainings reached 203 project beneficiaries; in 2016, 9,077 farmers attended the trainings);
- (iii) Intensive supervision missions were undertaken, especially during the harvesting season to monitor the implementation of the provisions included in the project documents on the prohibition of the child and forced labor by project beneficiaries and visits to project beneficiaries who received financial and technical support through Rural Finance and Irrigation Drainage components. No cases of child labor and no clear cases of forced labor were observed by the supervision missions in the project areas;
- (iv) Going beyond project-specific measures, the Bank signed an MOU with the International Labor Organization (ILO) to collaborate on elimination of child and forced labor and undertake Third Party Monitoring (TPM) of World Bank-financed projects. In 2015, the monitoring, conducted by ILO, did not find conclusive evidence that beneficiaries of World Bank-supported projects used child or forced labor;
- (v) The ILO report for 2015 harvest season was reviewed at the Technical Briefing of the World Bank Board on November 20, 2015 where the Board took the decision not to trigger any legal remedies. There was a general consensus that Bank-financed projects in the sector contribute to agricultural modernization and diversification thereby supporting the development of the non-cotton sub-sectors.
- (vi) In 2016, the ILO Report concluded that *“no incidences of child and forced labor were identified with regards to World Bank-supported agriculture, water and*

education projects". The Report further recognized as a major achievement of the Uzbek Government that child labor "*has become socially unacceptable*", and has been "*phased-out*". At the same time, the report warned that "*forced labor remains a risk for some categories of people, including staff of educational and medical facilities and government employees*". At the same time, it notes that "*the existence of such risks has been recognized by the Government of Uzbekistan. The Government continues to make policy improvements aimed at reducing risks of bad labor practices.*"

- (vii) During 2016 monitoring, the ILO experts visited 88 were sites of the Project, the ILO experts interviewed 39 entrepreneurs who received sub-loans for agricultural (non-cotton-related) activities, representing 6.9 percent of the total beneficiaries in this category and 49 farmers, members of Water Users Associations benefitting from water canal repairs and representing 4 percent of the total beneficiaries in this category;
- (viii) During 2016 and 2017 harvest, the ILO and the World Bank also provided support to the functioning of the National Feedback Mechanism (FBM) on child and forced labor, which consisted of two hotlines. Further capacity building is required to make FBM fully operational. Support was also provided by the ILO and the World Bank for improving public awareness of child and forced labor through nationwide communications campaign, with banners, posters, leaflets, radio, TV clips and SMS texts.
- (ix) Jointly with the ILO, and with support from key development partners, the Bank led a high-level policy dialogue with the GoU. The Government has demonstrated its commitment to the abolition and prevention of the use of child and forced labor during the cotton harvest through a number of policy statements, as well as a three-year Action plan to improve recruitment practices in agricultural sector, signed in January 2016.

Grievance Redress Mechanism. The project established a project-specific Grievance Redress Mechanism (GRM) as part of its response to the Inspection Panel (in addition to contributing to the National Feedback Mechanism on child and forced labor). In compliance with the Law on Citizen Complaints and Appeals, the RRA maintained a ledger where written appeals related to project were registered. In 2015-2016, a total of 21 written appeals from legal entities, requesting assistance in accessing sub-loans and grant funding from the project. As a response to these appeals, detailed written instructions describing the procedures for accessing project funding were provided.

MAP

