

Document of
The World Bank

Report No: ICR00003328

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-H1570 IDA-H7580)

ON A

GRANT

IN THE AMOUNT OF XDR 6.8 MILLION
(US\$ 10 MILLION EQUIVALENT)

AND AN ADDITIONAL GRANT

IN THE AMOUNT OF XDR 6.6 MILLION
(US\$ 10 MILLION EQUIVALENT)

TO THE

REPUBLIC OF TAJIKISTAN

FOR A

LAND REGISTRATION AND CADASTRE SYSTEM FOR SUSTAINABLE
AGRICULTURE PROJECT (LRCSP)

October 18, 2016

SOCIAL URBAN RURAL AND RESILIENCE GLOBAL PRACTICE
CENTRAL ASIA COUNTRY UNIT
EUROPE AND CENTRAL ASIA

CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2012 for IDA H1570)

XDR 1.00 = US\$1.54

US\$1.00 = XDR 0.65

(Exchange Rate Effective March 31, 2016 for IDA H7580)

XDR 1.00 = US\$1.41

US\$1.00 = XDR 0.71

FISCAL YEAR

January 1 - December 31

AF	Additional Financing
CIS	Commonwealth of Independent States
CORS	Continuously Operating Reference System
CPS	Country Partnership Strategy
CSFs	Collective/State farms
CSO	Civil Society Organizations
CY	Calendar Year
DFA	Dehkan Farm Association
DFID	Department for International Development (Britain)
DLC	District Land Committee
ECA	Europe and Central Asia
EMF	Environmental Management Framework
ERR	Economic Rate of Return
FA	Financing Agreement
FIAS	Farm Information and Advisory Service
FAO	Food and Agriculture Organization of the UN
FPSP	Farm Privatization Support Project
FRR	Financial Rate of Return
GBAO	Gorno Badakhshan Autonomous Oblast
GDP	Gross Domestic Product
GIS	Geographic Information System
GOT	Government of Tajikistan
GPS	Global Positioning System
IBTI	Inter-raion Bureau of Technical Inventory
IDA	International Development Association
IFR	Interim Financial Management Reports
IPM	Integrated Pest Management
LRCSP	Land Registration and Cadastre System for Sustainable Agriculture Project
LRMDP	Land Reform and Market Development Project (USAID)
M&E	Monitoring and Evaluation

MLRWR	Ministry of Land Reclamation and Water Resources
MZ	Markaz Zemin
NGO	Non-governmental organization
NPV	Net Present Value
ODPM	Office of the Deputy Prime Minister
PAD	Project Appraisal Document
PDO	Project Development Objective
PMU	Project Management Unit
PDPG	Programmatic Development Policy Grant
RERP	Real Estate Registration Project
RLCC	Regional Land Cadastre Center
RLRO	Regional Land Registration Office
SCLMG	State Committee on Land Management and Geodesy
SDR	Special Drawing Rights
SOE	Statement of Expenditure
SUERIP	State Unitary Enterprise for Registration of Immovable Property
TTL	Task team leader
UNDP	United Nations Development Program
USAID	United States Agency for International Development
WUA	Water User Association

Vice President: Cyril E. Muller
 Country Director: Lilia Burunciuc
 Sector Manager: Jorge Muñoz
 Project Team Leader: Victoria Stanley
 ICR Team Leader: Victoria Stanley

TAJIKISTAN

Land Registration and Cadastre System for Sustainable Agriculture Project (LRCSP)

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A. Basic Information			
Country:	Tajikistan	Project Name:	Land Registration & Cadastre System for Sustainable Agriculture Project (LRCSP)
Project ID:	P089566	L/C/TF Number(s):	IDA-H1570,IDA-H7580
ICR Date:	07/20/2016	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	REPUBLIC OF TAJIKISTAN
Original Total Commitment:	XDR 6.80M	Disbursed Amount:	XDR 13.40M
Revised Amount:	XDR 13.40M		
Environmental Category: B			
Implementing Agencies: State Committee for Land Management and Geodesy (SCLMG) Project Management Unit			
Cofinanciers and Other External Partners: USAID			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	08/10/2004	Effectiveness:	10/11/2005	10/11/2005
Appraisal:	10/25/2004	Restructuring(s):		07/13/2009 06/09/2010 01/24/2012 12/15/2014
Approval:	04/21/2005	Mid-term Review:	02/10/2014	04/16/2014
		Closing:	09/30/2010	03/31/2016

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

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

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Agricultural Extension, Research, and Other Support Activities	20	20
Central Government	20	20
Crops	15	15
Other Agriculture, Fishing and Forestry	15	15
Sub-National Government	30	30
Theme Code (as % of total Bank financing)		
Land administration and management	29	29
Personal and property rights	14	14
Rural markets	29	29
Rural policies and institutions	14	14
Rural services and infrastructure	14	14

E. Bank Staff		
Positions	At ICR	At Approval
Vice President:	Cyril E Muller	Shigeo Katsu
Country Director:	Lilia Burunciuc	Dennis N. de Tray
Practice	Jorge A. Munoz	Joseph R. Goldberg

Manager/Manager:		
Project Team Leader:	Victoria Stanley	Jessica Mott
ICR Team Leader:	Victoria Stanley	
ICR Primary Author:	Caroline Plancon	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

To expand farm privatization activities under the first Farm Privatization Support Project by providing private individuals or groups of farmers with secure land use right certificates and with essential complementary services.

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

(i) to expand farmland restructuring, (ii) increase the number of immovable properties with secure tenure rights, and (iii) propose a plan for the improvement of the immovable property registration system.

(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 :	Number of issued land use rights certificates that strengthen tenure security for families and small businesses in accordance with agreed standards.			
Value quantitative or Qualitative)	0	112,000		122,723
Date achieved	06/01/2006	03/31/2016		12/31/2015
Comments (incl. % achievement)	Target exceeded			
Indicator 2 :	Completion of a proposed plan to improve immovable property registration that meets agreed criteria.			
Value quantitative or Qualitative)	0	4		4
Date achieved	06/01/2006	03/31/2016		12/31/2015
Comments (incl. % achievement)	Target met			
Indicator 3 :	Percentage of households in the project areas who have at least one member who has basic understanding about land use rights and farmland restructuring for family farms.			
Value quantitative or Qualitative)	51.2%	67% (target indicator)		61.1%

Date achieved	06/01/2007	03/31/2015		03/31/2015
Comments (incl. % achievement)	Target substantially met			
Indicator 4 :	Percent of rural households who strongly agree that they make their own farm management decisions about what to plant on their dehkan ¹ farm plots			
Value quantitative or Qualitative)	29.1%	50%		44.6%
Date achieved	06/01/2007	03/31/2015		12/31/2015
Comments (incl. % achievement)	Target substantially met; 44.6% were highly satisfied and another 36.6% somewhat satisfied (no 'satisfied' option on the scale). Overall satisfaction is over 80% (81.2%)			
Indicator 5 :	Percentage of households who perceive that increased income is a very important reason for restructuring farmlands into family holdings.			
Value quantitative or Qualitative)	41.2%	70%		40% very important and 39% somewhat important
Date achieved	06/01/2007	03/31/2015		12/31/2015
Comments (incl. % achievement)	Again the rating is split between 'somewhat important' - 39% and 'very important' - 40%. The total rating for perceived importance is 79%, above the target.			
Indicator 6 :	Number of shareholders covered by issued certificates (in the aggregate).			
Value quantitative or Qualitative)	0	250,000		357,647
Date achieved	06/01/2006	03/31/2016		12/31/2015
Comments (incl. % achievement)	Target exceeded			
Indicator 7 :	Including females (beneficiaries).			
Value quantitative or Qualitative)	0	113,333 (45.3%)		152,851 (42.74 %)
Date achieved	06/01/2006	03/31/2016		12/31/2015
Comments (incl. % achievement)	Target substantially met on a % basis and exceeded on a number basis			

¹ Dehkan farms are the former collective farms that then were privatized so that all farm members became shareholders; and finally all shareholders were given the option to have individual or family plots.

(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 :	Average direct unit cost expenditure by Regional Land Cadastre Centers (RLCCs) during the past two years per use rights certificate issued.			
Value (quantitative or Qualitative)	study at the time of project prep. found the cost to be about \$240	\$25 US dollars		\$37 US dollars
Date achieved	06/01/2006	03/31/2015		12/31/2015
Comments (incl. % achievement)	Substantial cost reductions achieved. The actual cost has fluctuated between \$50 and \$21. In addition the Project has found it impossible to fully separate out the indirect costs so these cost figures include some indirects.			
Indicator 2 :	Number of RLCCs supported.			
Value (quantitative or Qualitative)	0	8		8
Date achieved	06/01/2006	03/31/2015		12/31/2015
Comments (incl. % achievement)	Target achieved			
Indicator 3 :	Survey and mapping capacity established and ensuring of the accessibility of the spatial databases.			
Value (quantitative or Qualitative)	The old secret geodetic network and almost no digital maps.	New coordinates and 100 % coverage of flatlands with orthophotos, which are used for farmlands restructuring and other registration-related activities.		New coordinates and orthophoto maps for 42,731 km2 are applying for legal cadaster and other purposes.
Date achieved	06/01/2006	03/31/2015		12/31/2015
Comments (incl. % achievement)				
Indicator 4 :	Policy analysis and investment planning conducted.			
Value (quantitative or Qualitative)	N/A	Analysis that improves the understanding of improvements to farmland restructuring and immovable property registration, and		The regulatory and legal analysis completed; investment plan developed.

		related investment planning.		
Date achieved	06/01/2006	03/31/2015		12/31/2015
Comments (incl. % achievement)	Target achieved. Multiple analyses completed; new regulations and processes for registration; investment plan prepared.			
Indicator 5 :	Number of people trained on immovable property rights and the processes of restructuring of farms into family holdings or on other immovable property needs and procedures.			
Value (quantitative or Qualitative)	0	265,000		301,829
Date achieved	06/01/2006	03/31/2015		12/31/2015
Comments (incl. % achievement)	Target exceeded			
Indicator 6 :	Number of the heads of newly established dehkan farms, trained on effective management of farms.			
Value (quantitative or Qualitative)	0	No target		16,740
Date achieved	06/01/2006	03/31/2015		12/31/2015
Comments (incl. % achievement)				
Indicator 7 :	Number of local specialists trained on registration of immovable property.			
Value (quantitative or Qualitative)	0	No target		201
Date achieved	06/01/2006	03/31/2015		12/31/2015
Comments (incl. % achievement)				
Indicator 8 :	Number of hectares of agricultural lands restored through on-farm irrigation and water management systems rehabilitation and covered by functioning water user associations.			
Value (quantitative or Qualitative)	0	12,200 hectares		12,158 hectares
Date achieved	06/01/2006	03/31/2015		12/31/2015
Comments (incl. % achievement)	Target achieved			

Indicator 9 :	Number of local specialists receiving environmental land management training that meets agreed conditions.			
Value (quantitative or Qualitative)	0	1,088		1,089
Date achieved	06/01/2006	03/31/2014		12/31/2015
Comments (incl. % achievement)	Target achieved			

G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	05/25/2005	Satisfactory	Satisfactory	0.00
2	10/14/2005	Satisfactory	Satisfactory	0.00
3	12/12/2005	Satisfactory	Satisfactory	0.30
4	03/27/2006	Satisfactory	Satisfactory	0.30
5	05/08/2006	Satisfactory	Satisfactory	0.40
6	08/21/2006	Moderately Satisfactory	Moderately Satisfactory	0.54
7	11/21/2006	Moderately Satisfactory	Moderately Satisfactory	0.59
8	04/02/2007	Moderately Satisfactory	Moderately Satisfactory	0.84
9	06/20/2007	Moderately Satisfactory	Moderately Satisfactory	1.06
10	11/30/2007	Moderately Satisfactory	Moderately Satisfactory	2.00
11	06/30/2008	Moderately Unsatisfactory	Moderately Unsatisfactory	3.20
12	11/09/2008	Moderately Unsatisfactory	Moderately Unsatisfactory	3.49
13	02/22/2009	Moderately Unsatisfactory	Moderately Unsatisfactory	3.78
14	06/03/2009	Moderately Unsatisfactory	Moderately Unsatisfactory	4.31
15	07/30/2009	Moderately Satisfactory	Moderately Satisfactory	4.60
16	12/05/2009	Moderately Satisfactory	Moderately Satisfactory	5.23
17	06/03/2010	Satisfactory	Satisfactory	6.06
18	11/14/2010	Satisfactory	Satisfactory	7.21
19	04/30/2011	Satisfactory	Satisfactory	8.62
20	11/12/2011	Satisfactory	Satisfactory	10.13
21	04/14/2012	Satisfactory	Satisfactory	10.55
22	12/26/2012	Moderately Satisfactory	Moderately Satisfactory	11.52
23	06/18/2013	Moderately Satisfactory	Moderately Satisfactory	13.30
24	12/21/2013	Moderately Satisfactory	Moderately Unsatisfactory	15.39
25	06/28/2014	Moderately Satisfactory	Moderately Satisfactory	17.29
26	11/30/2014	Moderately Satisfactory	Satisfactory	18.99

27	06/01/2015	Satisfactory	Moderately Satisfactory	20.22
28	01/19/2016	Satisfactory	Satisfactory	20.40

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		
07/13/2009	Y	MU	MU	4.50	<p>The restructuring formalized the following changes: a) the use of updated terminology for the PDO and activity descriptions, specifically, changing the terminology in the PDO from "farm privatization" to "farm restructuring"; b) the revision of project results and project implementation so they would realistically reflect political and technical constraints; c) updating the Project's implementation and procurement arrangements; d) the revision of the detailed description of land policy and environmental land management activities, and associated refinement of the environmental management framework (EMF); e) the reduction in the scope of the Pest Management Plan and its incorporation into the EMF; f) the adjustment of the area covered by Project Activities; and g) updating costs and financing allocations.</p> <p>The Project's closing date was also extended from September 30, 2011 to March 31, 2012.</p>
06/09/2010	N	S	S	6.06	<p>The restructuring amended the Grant Agreement: a) to enable IDA financing of NCTRB mass media expenditures; b)</p>

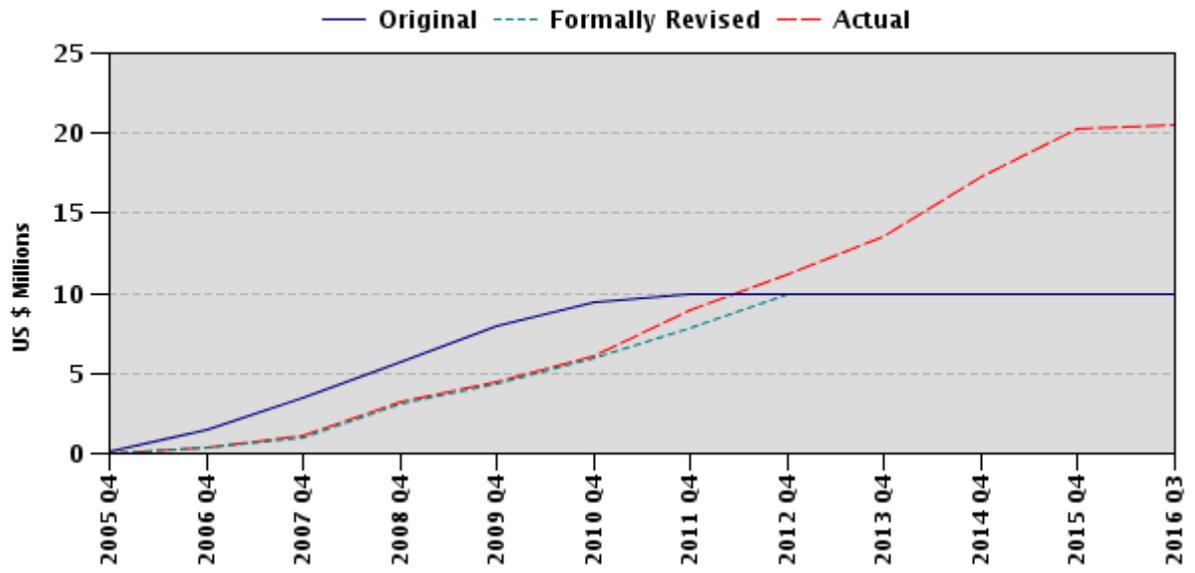
Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
					<p>decentralization of farmland restructuring to help increase the roles of the local authorities;</p> <p>c) to allow for future financing of RLCCs, as they would potentially become separate from the PMU, through which they were previously financed;</p> <p>d) recognizing the State Committee for Land Management and Geodesy as the successor organization to the Agency for Land Management, Geodesy and Cartography, as of March 9, 2010; e) DGA amendment to include an additional procurement method, single source selection of consultant firms, which would facilitate project implementation; f) expansion of the Project area from 38 raions to 50, plus any other raions which may have been added in the future after the PMU received a written no objection from the Bank.</p>
01/24/2012	Y	S	S	10.55	<p>The restructuring and additional financing of US\$10 million for the Project. To implement the additional financing the Project closing date was extended to March 31, 2015.</p> <p>The AF supported expansion of the scope of activities to: a) build understanding on how to improve the immovable property registry system by testing and demonstrating the integration of registry and cadastral information and good customer service in selected areas, and supporting analysis and planning for extension at</p>

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		
					the national level; b) expand farmland restructuring and issuance of certificates for family farms; c) expand the issuance of use rights certificates for other types of immovable property; d) expand the productive use of project-financed databases and mapping capacity and the further development of the cadastral system; e) expand policy analysis; and f) support activities that complement farmland restructuring and certificate issuance, including information for farms and other immovable property users, grants for on-farm irrigation rehabilitation, and environmental land management.
12/15/2014	N	MS	S	18.99	For an extension of the Project closing date from March 31, 2015 to March 31, 2016.

If PDO and/or Key Outcome Targets were formally revised (approved by the original approving body) enter ratings below:

	Outcome Ratings
Against Original PDO/Targets	Moderately Satisfactory
Against Formally Revised PDO/Targets- 2009	Satisfactory
Against Formally Revised PDO/Targets- 2012	Satisfactory
Overall (weighted) rating	Satisfactory

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

This Implementation Completion Report (ICR) describes the experiences, achievements and lessons learned of the Land Registration and Cadastre System for Sustainable Agriculture Project (LRCSP or the Project). The Project was implemented in two parts:

- The original Project was financed by a grant of XDR 6.8 million (US\$10.0 million equivalent) from the International Development Association (IDA) Grant approved on June 15, 2005. The grant closed on September 30, 2012 and was fully disbursed.
- An Additional Financing of XDR 6.6 million (US\$10.0 million equivalent) also from IDA was approved on March 16, 2012 and closed on March 31, 2016. The AF continued the farmland restructuring and added activities to establish an immovable property registry.

Tajikistan has an area of some 141,000 km² of which some two thirds form the foothills of high mountains. Several regional ethnicities are represented in its 6.3 million (m) population. Following the turmoil after independence the country fought a civil war that left it among the poorest countries in the world; however the economy is now growing. In 2003, annual per capita income was only around US\$200, and some 57% of the population was poor. By 2009, real GDP growth ranged from 8% to 10% per year and more than one million people had been lifted out of poverty. Tajikistan is an agrarian society and agriculture is critical to poverty reduction and economic growth. Some two thirds of the population is directly dependent on Tajikistan's 4.6 million ha of agricultural land for their livelihoods, of which the greater part is rain-fed pasture land. There are only about 720,000 ha of arable land, of which some 503,000 ha are irrigated, and are under rotation between cotton and cereal crops.

Following the collapse of the Soviet Union and Tajikistan's independence, the centrally funded and controlled farming system ceased to function. This system had consisted of large state and collective farms operating as part of a planned economic system that centrally determined and controlled every aspect of farming, especially for cotton, a major export crop, and wheat, the basic grain for food consumption in the country. Following the collapse of the central system, a decision was made to privatize land use rights in 1992, and was extended in 1996 to provide individuals and families with the opportunity to reorganize the state and collective farms into family (or "dehkan") farms with the state/collective farm workers as shareholders.

With the collapse of central management of state and collective farms there came a dramatic decline in access to and use of tractors and other farming equipment, as well as the ability to maintain the country's irrigation system pumps, pipes and canals. Soviet agriculture was heavily mechanized and large scale, while dehkan farm agriculture is much smaller scale with emphasis on human labor. To deal with these factors, a robust

land policy was thought to be fundamental to the revitalization and transformation of agriculture and the rural economy. Decisions concerning land – how it is allocated, used, governed, and financed – would play a central role in determining the shape of Tajikistan’s economic and social future.

Rationale for Bank involvement: The first Bank-financed Farm Privatization Support Project (FPSP) (1999-2005) restructured ten pilot Collective/State farms (CSFs) located in the lowlands. As a result, the former state-farm/collective-farm lands were divided among 5782 farm families who were provided with secure land use rights certificates that defined the boundaries of the respective allocated land parcels. FPSP thus established a transparent, equitable and generally acceptable model for restructuring of collective farms into family farms in Tajikistan. By providing them with secure land use rights, farmers acquired the freedom to make their own decisions on how to cultivate their land parcels, and as a result yields and income generally increased. For example, project farmers managed to increase their cotton yields from less than 1.0t/ha to 2.4t/ha and in the case of wheat from 1.2 t/ha to 2.6t/ha. By end of 2003, there were an estimated 21,000 private farms covering some 350,000 ha of which some 30,000 ha were irrigated land including the 19,000 ha under the FPSP’s ten pilot farms. The FPSP provided a good basis for a repeater operation.

FPSP had also built capacity in the State Committee for Land Management and Geodesy – (SCLMG), the Ministry of Agriculture, particularly the Irrigation Department, and local authorities of six raions (regions or departments) that could be used to further scale-up farm restructuring. FPSP established a farm restructuring methodology that rural people regarded as fair and transparent. However, during the FPSP, it became clear that the introduction of an efficient land administration system was needed to further the process. The lack of modern surveying, mapping and registration equipment in the raion land offices meant that raion land staff had to undertake ad hoc ground surveys. Outside of the six FPSP raions, the lack of a blanket exemption to requirements for multiple clearances meant that most aspiring farmers had to visit a range of officials in the raions as well as in Dushanbe to push the registration process forward, which was not only time consuming but also costly.

The LRCSP planned to improve the process of farm restructuring, increase the awareness of farmers, accelerate the issuance of land use rights certificates by setting up a nationwide awareness campaign, improved environmental management, and support for further land policy development. The LRCSP also included limited support for on-farm irrigation and water management rehabilitation to provide an incentive for otherwise reluctant local governments and vested interests to support the farm restructuring.

The Project was consistent with the Country Partnership Strategy (CPS) for the period 2006-2009, in particular with the Pillar 1: Improving Business Opportunities in Rural and Urban Areas, by pursuing farmland restructuring efforts. The activities in the Project for improving conditions for a sustainable increase in agricultural productivity and enhancing the enabling environment for economic growth, were fully consistent with the CPS 2010-2013. Poverty reduction was being addressed through the improved prospects for growth

and food security and through the Project's attention to the interests of vulnerable people, including rural women. The Additional Financing (AF) formed one element of the Bank's ongoing support for the land agenda, which also includes the Programmatic Development Policy Operations (PDPO), the policy dialogue, and tenure requirements in other Bank-financed investment projects.

The government's strategy for the development of agriculture at that time was focused on the efficient use of land, water, financial and other resources and eliminating government intervention in the dehkan farmer's decision making process. The LRCSP was consistent with Tajikistan's Poverty Reduction Strategy Program, and responded to a specific Government request for the Project. Investments planned for the project were designed to directly contribute to accelerated private sector growth by creating an enabling environment of improved land access and tenure security, as well as irrigation and water management support, and policy development.

1.2 Original Project Development Objectives (PDO) and Key Indicators

The original objective of the Project² was to expand farm privatization³ under the first Farm Privatization Support Project by providing private individuals or groups of farmers with secure land use right certificates and with essential complementary support services.

To track the progress toward achieving this development objective the following set of PDO outcome indicators was to be used⁴:

- At least 75,000 certificates issued to family farmers, in accordance with agreed standards;
- At least 75% of rural population in the 36 participating raions, including vulnerable groups, are well informed about land law and procedures governing farm privatization;
- At least 10,000 ha of agricultural lands restored through-farm irrigation and water management rehabilitation, and covered by well-functioning water user organizations;
- At least 3,600 farmers acquire better informed about integrated pest management through exposure through field demonstrations and participation in training;
- Project reputation for integrity as reflected in public opinion surveys;

² As per the ICR Guidelines the team has used the PDO from the Financing Agreement. The PAD PDO was worded somewhat differently: "To expand farm privatization through a repeater project to enable more rural people to become independent farmers and take management decisions in response to market forces, by providing them secure land use rights certificates distributed in a transparent and fair manner, and providing essential complementary support services."

³ The term 'farm privatization' was replaced with farm or farmland restructuring early on as the farms were already 'private' though still collective. The term "farmland restructuring" more accurately reflected the real process.

⁴ As the indicators differ throughout the original PAD the team has used the indicators in the results framework as these were the ones used to monitor implementation progress.

- Increased understanding of policy issues and increased consensus on long-term vision among senior policy makers, as demonstrated in reform initiatives and plans;
- Value of agricultural production per ha increases by 5%

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

The PDO was revised twice. The first time was during the 2009 restructuring and again for the 2012 Additional Financing (AF).

The revised PDO from 2009 reads: to expand farmland restructuring activities which were initiated under the Farm Privatization Support Project to enable more rural people to become independent farmers and take management decisions in response to market forces.

The main changes to the PDO in 2009 were to make the two wordings of the PDO from the Financing Agreement and the PAD more consistent and to replace ‘farm privatization’ with ‘farmland restructuring’ which more accurately reflected the process. In addition, several PDO indicators were dropped or adjusted and some targets were reduced. The final set of PDO indicators after the 2009 restructuring is as follows:

- 37,500 land use certificates (reduction from 75,000) issued for family farms during the project period in accordance with agreed standards.
- 50% of rural households (reduction from 75% and reworded) in 38 raions have at least one member well informed about land use rights and farmland restructuring processes.
- Rural people perceive that economic status in family farms exceeds that of un-restructured farms in comparable agro-ecological zones.

The revised PDO for the AF is to: (i) expand farmland restructuring; (ii) increase the number of immovable properties with secure tenure rights; and (iii) propose a plan for the improvement of the immovable property registration system.

Under the AF, the PDO was revised to simplify the text on farmland restructuring and add support for immovable property registration. The AF expanded farmland restructuring to cover more families and agricultural land and would also continue the complementary support. The Project was expanded to support the government’s policy goals of establishing an immovable property registry, which was still in a very early stage. The result framework was revised to reflect the modified PDO with the following set of indicators:

PDO outcome indicators⁵:

⁵ For a side by side comparison of the original and revised PDO indicators, please see Annex 2.b.

- Number of use rights certificates that strengthen tenure security for families and small businesses in accordance with agreed Standards
- Completion of a proposed plan to improve immovable property registration that meets agreed criteria
- Percent of households in the project areas who have at least one member who has basic understanding about land use rights and farmland restructuring for family farms.
- Percent of rural households who strongly agree that they make their own farm management decisions about what to plant on their dehkan farm plots.
- Percent of households who perceive that increased income is a very important reason for restructuring farmlands into family holdings.
- Number of shareholders covered by certificates issued (cumulative)
- of which female (cumulative)

1.4 Main Beneficiaries

The primary target group for the Project were rural people, including male and female employees of Collective/State Farms (CSFs), shareholders of joint stock company farms and farm associations, independent private farmers, and other community leaders, raion and jamoat (local district) administration officials, technical government, technical staff at local and regional levels, and staff of the Project Management Unit (PMU). The main beneficiaries were the same for both the original Project and the AF.

1.5 Original Components *(as approved)*

The original Project financed four components are as follows:

Component A. Farm Privatization and Land Registration. This component was to privatize 300 CSFs in a transparent and fair manner, to issue at least 75,000 secure land use certificates, and establish a uniform, parcel-based system of registration of land use rights by further supporting the central office of the SCLMG, upgrading four land offices to Regional Land Registration Offices (RLROs), establishing three new RLROs, and training staff to provide the required services.

Component B. Farm Information and Irrigation Support. This component involved three subcomponents: B.1 subcomponent to increase information for farmers to all 36 project raions, using local specialists to provide rural citizens with detailed information on the privatization process. B.2 subcomponent focused on on-farm irrigation and water management to provide grants to water user and farmer organizations for works and goods needed to rehabilitate on-farm irrigation and water management systems, and support creation of water users and farmer organizations to ensure a beneficiary contribution of at least 20% in the rehabilitation investments. B.3 subcomponent to build the capacity to advise and train farmers and others in integrated pest management. It included support for training, demonstration plots, equipment and use of quality seeds.

Component C. Project Management and Policy Support. This component supported the incremental costs of the PMU to manage the Project.

Component D. Policy Support. This component supported capacity development within the President's Economic Advisor's Office to enable Tajikistan to address national policy issues associated with scaling up the FPSP approach. The policy support included the establishment of a small policy unit, as well as technical assistance and training, to address land administration, cotton, water management, and other policy issues related to farm privatization.

1.6 Revised Components

The 2009 restructuring made some minor changes to Component wording and dropped activities related to the Farm Information Advisory Service which was no longer functional, and enlarged the focus of the B3 sub-component to focus on broader environmental land management and not just integrated pest control.

In 2012, the AF revised the components to reflect the new PDO and additional activities (revisions highlighted in italics).

Component A: Farmland Restructuring and Registration of Immovable Property Rights. This component planned (i) to enhance and expand farmland restructuring activities, regularize use rights certificates, *and improve records needed for immovable property registration* in a systematic, fair, and transparent way; (ii) to build capacity for farmland restructuring and the registration immovable property rights *including* by establishing and supporting RLCCs and *undertaking pilots*; (iii) to develop the national cadaster and support issuance and registration of land use certificates by establishing survey and mapping capacity and spatial databases, and (iv) *to undertake policy analysis and investment planning supporting farmland restructuring and immovable property registration* (the latter was previously in component D).

Component B: Information for Immovable Property Users and Irrigation Support. This comprised three distinct subcomponents: one provided information for Farmers *and Other Users of Immovable Property*. Provision of goods, consultants' services, services (other than consultants' services), training and operating costs to educate the population of participating regions on the farmland restructuring process, independent farm management practices, *and immovable property use rights and registration*. A second one supported on-farm Irrigation and Water Management Provision of grants to WUAs and farmers' organizations to finance on-farm irrigation and water management system rehabilitation, including the retrofitting required due to the smaller size of farms, and strengthening their capacity to implement these activities through provision of works, goods, services (other than consultants' services), training, and operating costs. A last one provided Environmental Land Management Provision of goods, works, consultants' services, services (other than consultants' services), and training to support (a) the improvement of cotton seed demonstrations and the associated dissemination of associated information, and (b) capacity-building among local agricultural and environmental specialists to advise and train farmers in assessment and monitoring of

environmental conditions and in implementation of improved agro-ecological practices, including integrated pest management, for the enhancement of sustainable productivity.

Component C: Project Management and Coordination. Provision of goods, works, services (other than consultants' services), training and operating costs to strengthen the Recipient's capacity for Project management, monitoring and evaluation, including audit, procurement and financial management activities.

There were only three components included in the AF, as the original Component D activities were included under component A.iv.

1.7 Other significant changes

Restructurings. In July 2009, a Level One (i.e., Board approved) restructuring was processed to update project activity terminology, project areas, implementation and procurement arrangements; modify the results monitoring framework to reflect political and technical constraints and refine the environmental management provisions; and simplify the financing and disbursement arrangements. The Restructuring also included a six-month extension of the closing date to March 31, 2012.

A Level Two project restructuring took place in July 2010 to update procurement methods, include a provision for potential future organizational reform of key implementing units, and further increase the project area.

Additional Financing. In 2012, the AF (US\$10 million equivalent), along with the changes previously outlined, extended the Project closing date to March 31, 2015.

A final restructuring was processed in December 2014 to provide an extension of the Project closing date of 12 months – from March 31, 2015 to March 31, 2016. The reason for the extension was because additional time was needed to fully achieve the development objective, and in particular "to propose a plan for the improvement of the immovable property registration system."

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

The Bank team consisted of a number of knowledgeable and capable specialists who were able to draw on local and counterpart knowledge to formulate the Project's objective, targets, and activities. The Bank team was also able to draw on the experience of the FPSP in the original project design. It can be argued that the original design was too optimistic for the country context, but the Bank team saw the Project as an opportunity to continue to engage the government on land policy. The later restructurings and AF sought to support the evolving land policy of the government and the institutional capacity already in place. This was a risky and opportunistic approach but it was successful and the Project catalyzed the land policy and investment in private farming. As restructured, the project design matched the needs of the country, improved

upon the methodology for farm restructuring piloted by the FPSP, and added additional needed activities (for example on immovable property registration). The Bank team drew on its long and varied experience in the ECA region on farm restructuring and land administration projects. The team also benefited from assessments, projects and experiences of other donors in Tajikistan and incorporated the lessons learned such as inclusion of local leaders in the process, the need for awareness raising and education activities directly to farmers, and a recognition of the difficulties of replicating farm privatization in cotton areas. For the latter, the Project chose not to focus only in cotton areas where the farm restructuring would have faced more challenges. The main risks were taken into account, and several, such as vested interests which resisted the Project in the early years and the cotton debt, were realized and eventually overcome.

2.2 Implementation

The Project became effective in October 2005 and by the start of actual implementation in 2006 only a small minority of the families in the area of the former state and collective farms had acquired their own farm parcels. A key bottleneck was the interference, or in some cases indifference, of local governments which were essential partners in the farm restructuring process. There was also a lack of understanding among local authorities, farm managers and local citizens about the process and benefits of farm restructuring.

From the start, the Project encountered challenges in identifying appropriate technology systems, testing them, and receiving government approval to use them. The Soviet-based coordinate system was secret, and attempts to make the data available were not successful. Modern satellite-based ortho-images were used that could show details of lands being divided and a modern, open coordinate system was built. A cumbersome land registration certificate process required all certificates to be printed on special paper with a special folder at only one print shop in Dushanbe. As recognized in the risk section of the PAD, many local authorities opposed farm restructuring, in part because it would reduce their control over agricultural decisions and impair their ability to meet fixed quotas for cotton. The cost of getting certificates was high, and many trips to different offices were required to complete the process.

The new PMU was also building its capacity during the early years of implementation and this was more difficult than the project appraisal had recognized. Most of the original Project funds were spent in building the necessary infrastructure for farmland restructuring, i.e. the orthophotos, equipment for the cadastral system, and setting up the regional cadaster offices and improving the processes. More time was also needed to educate farmers about the benefits of farmland restructuring.

In 2008 the PDO and the implementation progress ratings were downgraded to moderately unsatisfactory, mainly because only 357 land use certificates had been issued at that time, compared to the original target of 75,000. The September 2008 Mid-Term Review (MTR) identified the main constraints and developed an action plan to raise project performance to a satisfactory level. This action plan included issuance of key directives from government and then subsequent implementation of these directives by April 2009. The pace of farmland restructuring began accelerating after this and the

Project was substantially restructured (level 1) in June 2009 and the closing date extended to March 2012 to allow additional time for implementation under these improved conditions.

A Level Two project restructuring took place in July 2010 to update procurement methods, and revise the financing agreement to include provisions for the RLCCs to become self-financing, and an increase in the project area to include another 12 raions. In both cases, the restructuring included changes to make the farm restructuring more efficient and to build the institutional environment for immovable property registration. Supervision missions were more frequent, taking place every 3 to 4 months and with extensive teams and reviews of activities. Given the complexity of the reform involved in farmland restructuring, Project ratings were downgraded when necessary to respond to government inaction or other issues. The Bank team then worked with the implementing agency and government to develop and implement the necessary changes.

With support from the Bank team the government made certain necessary policy changes, including a formal government decision to forgive cotton debt so that new certificate-holders would not begin farming with a debt burden left over from the collective farm and agreement to simplify the certificates. Perhaps the most important additional government factor was that several regional governors came out in strong support of farm restructuring and used the power of their offices to overcome the opposition of other raion officials. This was particularly true in Sughd region, where the Oblast Chairman issued a directive in December 2013 that not only ordered officials to cooperate but also permitted the use of streamlined procedures to issue the certificates. Almost three-quarters of the certificates issued in 2014 (74.8%) were issued in Sughd region.

The Project was also fortunate to have parallel support from other donors in the sector including: European Union-TACIS financed support from FINNMAP on technical mapping aspects; the Swedish International Development Cooperation Agency (SIDA), which financed support to registration; Helvetas Swiss Inter-cooperation, which supported legal aid for farmers; and the United States Agency for International Development (USAID), which financed the Land Reform—and later Land Reform and Farm Restructuring—Project. All of these donor-funded activities and projects coordinated closely with the LRCSP.

In 2012, the AF (US\$10 million equivalent) was approved to support additional and expanded activities that were intended to scale up the Project's impact and development effectiveness and to respond to the changing government policy, in particular the decision to implement an immovable property register. While this idea continued to encounter some resistance from entrenched interests (for instance the BTIs) in January 2015 the State Unitary Enterprise for Immoveable Property Registration (SUERIP) was established. The AF was also linked to a Programmatic Development Policy Grants (PDPG) series that was underway at the time. The land agenda was a key part of Policy Area 2: Improving the Environment for Private Sector Development for agricultural sector reform; and the number of land use certificates issued was set as a prior action for PDPG 4 and PDPG 5, and as a trigger for PDPG 6. This was helpful in pushing the decision of

the government and of regional governors to move ahead with farm restructuring in the regions.

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

Design. The Project's results framework (RF) included both outcome indicators associated with the PDO and intermediate results with project components. The PDO was restructured in 2009 with simplified text on farmland restructuring and expanded in 2012 to include appropriate support for improving the immovable property registration system under the AF. The PDO was monitored through five Outcome Indicators, with six indicators tracking intermediate results for three components. Within the PDO, measurement of "*secure rights*" was accounted for in the outcome indicator covering knowledge among certificate holders. However, the indicators on independent farming and motivation for restructuring, while informative, were less directly linked to the PDO and overly complicated with the inclusion of terms such as "strongly agree" and "very important". Interpretation of such terms by beneficiaries is not always consistent, and could have been better replaced with more straightforward "agree/important". A baseline to assess knowledge, attitudes and practice among farmers and farm workers was conducted in partnership with USAID in 2007 providing values for certain PDO and other indicators. Overall, the result framework was quite complex and required simplification which was carried out during the several restructurings.

Implementation. Although initial reporting on project progress was weak, for most of the Project's life the PMU produced timely quarterly reports that covered the results framework. Over time, more detailed quantitative reporting of various parameters was added, e.g., female heads of farms, days taken for various approvals, by oblast, raion and RLCC. The PMU benefited from dedicated resources for M&E and continuity in M&E personnel. Three major surveys were conducted assessing, among other issues, farmer and farm worker perceptions and practice in land reform and agriculture. In addition to the baseline (see above), a study was conducted in partnership with USAID and DFID in 2012, and a project evaluation in 2015. A notable feature of the two later surveys is their broader investigation of the social, economic and environmental impacts of obtaining farm certificates. All surveys documented and highlighted the status of women in agriculture and the challenges they encountered, e.g., omission from certificates due to tax burdens, limited access to information, as well as improvements in their status as they acquire more knowledge and decision-making power (see section 3.5).

Utilization. Along with monitoring of its internal activities, by the end of the Project data on farmland restructuring were serving a number of other purposes. For example, close monitoring of rates of farm certificate issuance enabled the PMU to move personnel to where there was demand for certificates. Externally, these data have demonstrated the importance of high-level commitment in accelerating the creation of independent farmers, e.g., in Sughd. Data on the impacts of certificate issuance also fed into discussions of the Joint Working Group on Land Reform supported by USAID. The broader scope and findings of the later surveys have also provided valuable inputs into discussions on adaptation to climate change in Tajikistan and the critical role of land reform and women.

2.4 Safeguard and Fiduciary Compliance

Environmental Safeguards. The Project was rated category B and triggered OP 4.01 on Environmental Assessment and OP. 4.09 on Pest Management mainly to provide quality control for activities related to small civil works such as office rehabilitation, on-farm irrigation rehabilitation, and the improvement of cotton seed selection. For these purposes an Environmental Management Framework (EMF) and Integrated Pest Management Manual (IPM) were developed during preparation of the Project. For the Additional Financing the revised EMF put together both the EMF and IPM in one joint volume, because the major activities on office rehabilitation, support for water-users associations and cotton demonstrations were completed at that time. A new subcomponent on Environmental Land Management was mainly concentrated on the capacity building among local agricultural and environmental specialists to advise and train new farmers in assessment and monitoring of environmental conditions and in implementation of improved agro-ecological practices, including integrated pest management, for the enhancement of sustainable productivity on their land parcels. The restructured project design included provision for a training of trainers program in environmental land management (including integrated pest management) to improve the quality of advice to newly independent family farmers. Pest management was therefore addressed as part of the overall environmental land management capacity building, and through the environmental management procedures for small on-farm irrigation investments. The safeguard documents were included in the grant agreements and used throughout the review, screening and clearance process. No systematic or direct deviance from the EMF procedures was documented during the periodic supervision missions. Environmental safeguards under the project can be rated *satisfactory*.

Financial Management. The financial management arrangements for the Project, including accounting and reporting, internal control procedures, planning and budgeting, external audits, funds flow, organization and staffing arrangements are rated *moderately satisfactory*. The PMU used the cash basis for project accounting and utilized the 1C accounting software for project accounting. During the project implementation period the program was updated and automatically generated SOEs, IFRs and audit reports, and allowed tracking contract payments. The internal control system at the PMU was overall acceptable to the Bank throughout implementation. The PMU submitted IFRs on time and they were found to be satisfactory to the Bank. The last count of fixed assets procured under the Project was done on December 1, 2015 and the total amount of assets was US\$2,271,433.88 at that date. The PMU also used the fixed assets procured during the implementation of the closed grant (IDA H1570). All fixed assets procured by the Project were accounted for and the list was submitted to the Government's authorized body for disposal/reallocation. The Project audit report for CY2015 was submitted on June 30, 2016 and found to be acceptable to the Bank. The final audit for the remainder of CY2016 is due on September 30, 2016.

Procurement. Procurement under the project was conducted in full compliance with the applicable Procurement and Consultants Guidelines and provisions of the Financing Agreement. Procurement staff of the PMU demonstrated good knowledge of applicable rules and procedures. PMU staff and a few Government officials related to the project passed procurement training in Turin, Italy, and visited several procurement workshops

and seminars in Tajikistan and neighboring Central Asia countries. Several post review exercises conducted by the Bank during the lifetime of the project confirmed high quality of the procurement documents and proper performance of procurement staff of the PMU. Minor deviations revealed during post-reviews or day-by-day contacts were immediately and appropriately removed. Procurement plans were updated regularly and were publicly disclosed in accordance with the required procedures. Although procurement supervision functions passed to different specialists several times, it did not bring any transition problems. Procurement under the project can be rated *satisfactory*.

2.5 Post-completion Operation/Next Phase

Building on the successful completion of the LRCSP and responding to the needs of the Government to support the new immovable property registry, a new Real Estate Registration Project (RERP) has been prepared and approved by the Bank's Board of Directors in April 2016. The RERP builds directly upon the achievements of the LRCSP and further supports the implementation of a unified registration system nationwide, which would improve tenure security and reduce transaction costs for property transactions. The current land use certificates issued by the Project provide secure use rights to farmers though they are not yet fully tradable (i.e. can be bought and sold). For this and for support to all property transactions, including of urban apartments, etc. a full immovable property registry has been established but requires strong support in its early years to build an effective and efficient immovable property registry system.

The RERP's development objective is to support the implementation of a unified real estate registration system nationwide, which is reliable, transparent and efficient. This objective will be achieved by (a) developing the real estate registration system throughout the entire country with efficient procedures, systems, and human resources; (b) organizing and digitizing the documents and data currently in the Markaz Zemin (MZ) and the Bureau of Technical Inventory (BTIs) and creating systems for data management and electronic registration; (c) legal framework development; and (d) increasing public awareness of the registration system and how to register. The RERP will be implemented through State Unitary Enterprise for Registration of Immovable Property (SUERIP) but builds on the capacity already built in the country and specifically within SLCMG.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

While the relevance of the initial project design can be considered moderate given the need for restructuring and substantial changes to indicators, the relevance of farmland restructuring and improved tenure security were, and remain, highly relevant for the country. The project restructurings and AF continued to respond to the country's evolving land policy and development priorities. The GOT's National Development Strategy (2015) and Poverty Reduction Strategy III (2012) both emphasized the need to promote economic growth, especially in rural areas, and recognized the importance of

land tenure security and independent farm management for the country's development and poverty reduction goals.

The objectives of the Project are still highly relevant to Tajikistan today as it embarks on setting up a fully functioning immovable property registry which will improve tenure security and reduce transaction costs for all property transactions, an impediment to small and medium enterprise led growth. The CPS 2015-18 includes access to land and property rights that are well defined and enforced as important enabling conditions for private investment in agriculture and environmental management. As most private businesses in Tajikistan are small farms, helping them secure access to markets and sustainable income is central to reducing extreme poverty and boosting shared prosperity. As the government's policy and strategy for land reform has evolved over the past decade – from farm restructuring to setting up a real immovable property register – the Bank's support through the Project has also evolved, continuing a strong commitment to Tajikistan's development.

3.2 Achievement of Project Development Objectives

The Project has met both its original and revised PDO. The original PDO, to expand farm restructuring by providing private individuals or groups of farmers with secure land use right certificates and with essential complementary support services has been met:

- The number of use rights certificates that provide secure land use rights for individual and family farms has exceeded the target, with 122,723 certificates issued to new individual and family dehkan farmers against an original target of 75,000 and revised target of 112,000.
- The final beneficiary survey shows 61% of farmers now have basic knowledge of their rights. Project farmers received information about land restructuring and land use rights from significantly more sources (4.5) than non-Project farmers (3.1), and scored higher on the full knowledge test (7.1 compared to 6.7).
- For the complementary support services, the Project supported 73 Water User Associations in areas where at least 70% of the farmers had received certificates from the Project and 12,158 ha of agricultural land were restored through irrigation rehabilitation (original target of 10,000 ha.)
- Farmers themselves provided 150 demonstration plots to show good agricultural practices to other farmers, and 1,075 farmers and specialists were trained in 50 raions on environmental practices for sustainable agriculture.
- Finally, management training was provided for 16,740 dehkan farm heads and specialists to deal with agricultural production, environmental sustainability, legal issues, marketing and other matters.

The revised PDO to: (i) expand farmland restructuring, (ii) increase the number of immovable properties with secure tenure rights, and (iii) propose a plan for the improvement of the immovable property registration system, has also been met.

- Farmland restructuring was expanded across the country with 122,723 certificates issued to new individual and family dehkan farmers.

- The certificates benefited more than 321,000 shareholders, 43% of whom are women and provided them with secure land use rights to their properties.
- The plan to improve immovable property registration has been met through the work done at four pilot sites for registration of rights to immovable property which have generated useful knowledge and lessons learned that SUEIP has incorporated into the new system, and an investment plan was completed under the Project for SUEIP outlining specific types of investment needed and amounts for a full immovable project registry to be fully established nation-wide.

Finally, with regard to the impact of farm restructuring on farmers and their ability to take management decisions about their farms, based on the findings from the three surveys carried out during implementation:

- The percent of rural households who strongly agree that they make their own farm management decisions about what to plant on their dehkan farm plots show 44.6% of respondents now “strongly agree,” up from 29.1% in 2007. When “somewhat agree” and “strongly agree” are combined, 81.2% indicate they make most of the farming decisions themselves.
- An examination of Project impacts found that more than 75% of farmers indicated their farm incomes had increased as a result of farm restructuring, and perceived that increased income was an important reason for restructuring farmlands into family holdings. Results from the survey also show that 40.1% of farmers said income was a “very important” factor in wanting to participate in the farmland restructuring and apply for the secure land use rights certificates. When “somewhat important” and “very important” are combined, 79.2% indicate that income is an important reason.

These and other findings from the beneficiary survey (see below on poverty and gender impacts) demonstrate that farmers now have more freedom to decide how to farm and what to farm, creating a more flexible and diversified farm economy and moving forward an agricultural transition from state control to a more independent and more market driven sector.

3.3 Efficiency

The ex-ante analysis of the Project suggested that the Project was economically and financially feasible. The main benefits that were envisaged to occur at the Project’s original appraisal were through increased value added of agricultural activities (crop production) through broadly enabling access to land by the farm workers of the state and collective farming entities. The economic analysis at appraisal did not include a clear description of the hypothesis and economic/financial model used for the above calculation. Due to data availability limitations the original, or a similar, analysis could not be replicated. Moreover, through the Project’s restructurings and additional financing the focus of the activities shifted from an agriculture project focused on agricultural production benefits to one that targeted wider land administration enhancements and tenure security. As the Project’s objectives evolved, so did the indicators; hence, the indicators at the closing of the Project aimed at measuring the reliability and efficiency of land administration and the impacts of tenure security on farmer’s choices. That said,

there is good evidence that the Project had substantive economic effects both in terms of output (agricultural output, household income, investment, and employment) as well as efficiency (reduction in costs and time for issuing land use certificates). The Project also provided a significant impulse for positive structural changes (freedom to farm, diversification of crops, and access to inputs and markets).

Output Effects. By surpassing the original goal of issuing 112,000 certificates for individual and family Dehkan farms (122,723 were issued by Project closing), the Project managed to cover approximately 32% of Tajikistan's arable land. Moreover, the perceived economic impact of the Project on households' incomes is considered positive, as three quarters of beneficiaries stated that having a certificate has led to increased farm income. The Project's impact on agricultural investment by rural households is also significant for both individual and family Dehkan farms (see Annex 3 for additional details), a result of both increased land tenure security and better business planning. Finally, Project beneficiaries reported that they use more of their own labor as well as hiring more labor on their farms following the Project's certificate issuing activities.

Sectoral Efficiency Effects. Through the Project's support to seven regional centers and one additional urban center, the simplified registration system managed to reduce the processing time from 157-176 days under the existing system to only 30 days. The simplified system also resulted in substantial cost savings, eliminating the need for special printing on special papers, and in most cases empowering the regional centers to issue the certificates rather than routing them through Dushanbe. Furthermore, the Project worked to establish a new geodetic coordinate system that is now in use nationwide for all immovable property registration. It should be noted that the economic analysis focuses mainly on sectoral efficiency rather than the Project's efficiency, given the data limitations. The sectoral efficiency approach has been widely used for the ex-post analysis of comparable Bank land administration operations.

Structural Changes. The Project has contributed to structural and other transformations towards a freer agricultural sector in Tajikistan. Most importantly, farmers overwhelmingly agree that they are able to make decisions about their farms. Freedom to farm was also rated as the single most important reason for land restructuring, according to the Project beneficiaries. Consequently, Project beneficiaries have opted to diversify their cropping patterns to respond to market forces (higher prices) and with positive externalities for food security. By diversifying crop production, rural households have a better safety net than earlier periods of obligatory monocultures. Finally, the Project has significantly supported the process of farm restructuring and has contributed to shifting perceptions about what farmers can do on their own farms (see more details in Annex 3).

3.4 Justification of Overall Outcome Rating

Rating: Satisfactory

The overall outcome has been assessed against both the original and revised PDO and is rated Satisfactory based on the following:

- (a) despite some early project design issues, the project objectives were, and remain, highly relevant to expanding farmland restructuring and improving tenure security and the overall rating for relevance is substantial;
- (b) substantial efficacy with regards to achievement of the PDOs; and,
- (c) an overall modest efficiency given the data limitations.

The original and AF Project expanded farmland restructuring and provided enhanced tenure security for more than 300,000 beneficiaries, thereby contributing to the transition to a family-farming based system which is more flexible, more diversified and more responsive to price signals than the state-controlled agriculture. The Project also put in place the basic infrastructure for a full immovable property registration system, including orthophoto maps, a modern coordinate system, processes and procedures, trained staff, and citizens who have an enhanced understanding of secure tenure and its benefits.

According to the ICR guidelines, the Overall Outcome Rating was assessed against both the original and revised PDOs and indicators as shown below:

	Original PDO and indicators	Revised PDO and Indicators 2009	Revised Indicators and Indicators (AF, 2012)	Overall
Rating	Moderately Satisfactory	Satisfactory	Satisfactory	
Rating value	4	5	5	
Disbursement	US\$4.31	\$5.61	\$10.55	\$20.47
Weight (% disbursed after PDO change)	21%	27%	51.5%	
Weighted value	0.84	1.35	2.58	4.77
Final Rating				Satisfactory

3.5 Overarching Themes, Other Outcomes and Impacts

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

Poverty Impacts. From the beneficiary survey carried out at the end of the Project, the question “What difference does it make in the lives of farmers to receive a certificate confirming their rights to land?” was answered in several ways. Farmers were asked directly in the 2014-15 survey about what they have changed as a result of receiving certificates. They also were asked detailed questions about impacts and changes in a series of focus groups that provided qualitative information. Finally, analysis of changes across time using 2007, 2011, and 2014-15 survey results provided a means of evaluating changes in farming over time. In an effort to compare changes over time, results from three Project surveys were compared: a baseline 2007 survey of 1500 farmers; a 2011 study published in 2012 of Farmer and Farm Worker Perceptions of Land Reform and

Sustainable Agriculture in Tajikistan (1800 respondents), and the 2014-15 survey of 1600 farmers.

The major change has not been to eliminate crops; it has been to add crops and diversify agriculture and improve food security. Surveys in 2007, 2011 and 2014-15 document an increase in the number of crops grown from 1.28 in 2007, to 2.34 in 2011, to 4.26 in 2014-15. Importantly, farmers with certificates have expanded their investments in orchards (only 8.8% reported having orchards in 2007; now 35.6% do), vineyards (up from 4.2% in 2007 to 12.1% in 2014-15), and vegetable crops (onion and potato production both have increased from about 10% to more than 40% during the same time period). Over the 2007 to 2014-15 time period, the number of cotton farmers saying they are growing only cotton decreased from 51% to 12%, and the number of wheat farmers growing only wheat declined from 45% to 14%.

The increases in production create opportunities for food processing and marketing of additional crops produced. Gross farm income also has increased over time, although precise income comparisons are difficult since many survey respondents in 2007 were still working on reorganized collective farms. Virtually all respondents with certificates in the 2014-15 survey reported at least some gross farm income from the sale of crops. The average gross farm income of 9,850 somoni for all farmers now exceeds the reported combined income from migrant remittances and non-farm income (6,635 somoni). Finally, there is evidence that farmers with certificates have more money to spend on non-essential household goods. Over time, 2014-15 respondents report that 55% have a car, compared to 24% in 2007; and 82% have a satellite receiving dish compared to 6% in 2007.

Gender aspects. Progress has been made in increasing information and knowledge of women about land use rights and land restructuring and was a focus of the AF. The 2007 baseline found that many women on reorganized collective farms lacked any information about what was happening, and had been left out of the process. The 2014-15 survey focused on those who had received certificates. It showed that women who had received certificates or were shareholders had information and knowledge levels that are equal to or in some cases slightly above those of men. Female respondents to the survey said they were just as likely as men to have attended training workshops and see publications as men. This suggests that if women are included in the certification process, they will receive as much information and learn as much as men.

The relatively low number of women as heads of farms reflects a strong cultural bias toward male-headed households in Tajikistan. However, women who are heads of farms have crop income that is either equal to or in some cases greater than their male counterparts. In focus groups, female heads of farms said that even though they are farm heads, they often have trouble getting credit to buy inputs because the houses, cars, and equipment on the farm are often considered to be the husband's, outlining additional work for the future.

(b) Institutional Change/Strengthening

Historically, Tajikistan's coordinate data was kept secret and cadastral records did not reliably reflect the situation on the ground. Furthermore, data on individual parcels could not be accurately compiled together into larger databases. Since 2009, the Government has enacted a number of regulations to facilitate the establishment of an accessible geodetic coordinate system and to upgrade and digitize cadastral maps. The Project supported this reform and institutional development through the provision of equipment, technical assistance and training that help to transform behavior at the institutional level. The Project supported significant institutional and legal reforms, including the adoption of the Resolution of the GOT on "Procedures and peculiarities of the state system registration of immovable property and rights to it," dated October 04, 2013, under the number 447; the Decision of the SCLMG, dated June 06, 2014, under the number 24, on the "Rules, the procedure for registration, maintenance and forms of registration files, registration books, application books, and assignment of individual cadastral numbers of immovable property"; and several subsequent decisions of local authorities to adopt the pilot registration system.

One of the main institutional changes was the creation of the SUEIP in March 2013. Governmental Decree 88 brought together in the State Unitary Registration of Immovable Property two databases, MZ for land, and the BTI for property. The two, which have operated as separate enterprises, have been merged into a single enterprise. The Project supported four pilot offices to test registration processes and procedures, generate knowledge about bottlenecks and issues and test new procedures. This knowledge and good practice have been absorbed into SUEIP and the new RERP will build upon this experience.

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

Capacity Building. The Project has had a continuing impact on local specialists trained on GPS/GIS. Seven short term training courses on GPS and GIS technologies have been carried out for the 327 specialists from RLCCs, SCLMG and for engineering students. Due to relatively low salaries at the Project offices and within government, these specialists can make almost twice as much money by taking a job elsewhere that uses their training. This led to high project staff turnover. While this was an unfortunate outcome for the Project, it indicates that the trainings received were clearly valuable, and provided an economic benefit to the trainees and also to the private sector which was able to absorb their new skills. The trainings on farm management and environmental skills were also an occasion to create new opportunities for local consultants to improve their skills and to advise new farmers.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

The final beneficiary survey was completed at the end of 2014-early 2015 and a workshop was held in March 2015 to present the findings from the survey to a wide range of stakeholders including government, donors and NGOs. Further details on the final survey results can be found in Annex 5.

4. Assessment of Risk to Development Outcome

Rating: Moderate

As described above, the Project continues to be relevant since the streamlined procedures for farm restructuring will continue under the SCLMG. In addition, the pilot registration offices, new geodetic network, orthophotos and other improvements are now being used throughout the sector and across the country. Land rights and tenure security remain key development objectives in Tajikistan and the government and Bank support in the sector will continue under the RERP.

Institutional sustainability has been addressed through capacity building of the participating rural population, technical support agencies, and relevant line ministries. Financial sustainability has been addressed through elimination of unnecessary clearances and cost reductions associated with technological improvements in the farm restructuring process, and the establishment of affordable user fees for land registry services. However recognizing the difficult budget situation in the country, risk to development outcome is considered moderate. The on-going support to the sector through the RERP will be important to build on this institutional and financial sustainability.

USAID continues its involvement in the land sector and implemented the Land Reform and Farm Restructuring Project, building directly on the LRCSP. USAID is also planning a next phase to complement the Bank-financed RERP in support of SUEIP and immovable property registration.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Moderately Satisfactory

The Bank team consisted of a number of well-respected and knowledgeable specialists who were able to draw on their knowledge to formulate the Project's objective, targets, and activities. The Bank team was able to draw on the experience of the FPSP in the original project design. It can be argued that the original design was too optimistic for the country context and led to the significant restructurings. However, this ambitious design was at least partly deliberate as the opportunity to continue work in the land sector was considered vital for Tajikistan's future. The later restructurings and AF evolved with the land policy agenda and sought to bring the design more in line with the institutional capacity already in place. As restructured, the project design matched the needs of country, improved upon the methodology for farm restructuring piloted by the FPSP, and included additional needed activities. The Bank team also benefited from assessments, projects and experiences of other donors in Tajikistan and incorporated the lessons learned.

(b) Quality of Supervision

Rating: Satisfactory

Bank supervision took place on a regular basis, providing appropriate and well targeted advice and observations. Supervision missions visited at least twice a year for the purposes of understanding implementation progress and any issues. The Aide Memoires were thorough and detailed and provided professional advice throughout the Project. The supervision team was composed of skilled and experienced specialists who had both designed and supervised projects of this kind in the ECA region and elsewhere. The Project was restructured several times to improve implementation and adjust to changing country circumstances. The AF also responded directly to client needs. Though the Project had four changes of TTL, the Bank team developed close working relationships with the counterparts at all levels, and promptly responded to all the problems during the implementation of the Project. Perhaps most importantly the second TTL was involved in the Project from its inception and was persistent in working with the government through all avenues (including the PDPG series) to achieve success. The client stated that they were fully satisfied with the team, the guidance provided, and the level of cooperation and collaboration.

(c) Justification of Rating for Overall Bank Performance

Rating: Moderately Satisfactory

While in retrospect the original design was complex given the country's capacity, the supervision efforts, restructurings, and persistent efforts of the team to explore all avenues during implementation resulted in success. On balance, the performance of the Bank is satisfactory given its efforts throughout to improve project implementation. However, due to the requirements of the ICR rating formula, the overall rating for Bank performance can only be Moderately Satisfactory.

5.2 Borrower Performance

(a) Government Performance

Rating: Satisfactory

The Borrower had to address several institutional and legal issues to implement the project. The government may not have fully understood the benefits of farm restructuring at the start, but as the Project moved forward the government's understanding evolved and it responded appropriately. For example, in order to accelerate the farmland restructuring, the GOT adopted a number of decisions and decrees, including the Decree of the President, #1775 dated June 30, 2006, which was instrumental in accelerating implementation of the Project. While Government decision making took time particularly at the start of implementation, in the end the Government provided the necessary support to the Project and its activities, including an appropriate policy framework, which culminated in 2013 in the creation of SUERIP as the new immovable property registration agency.

(b) Implementing Agency or Agencies Performance

Rating: Satisfactory

The Project was implemented by the SCLMG with the support of the PMU, which directed the activities of the Project and the RLCCs. While weak institutional capacity was an issue at the start of implementation, the PMU and SCLMG grew into their roles and the preparation and execution of budget plans, procurement, and monitoring and evaluation were all managed competently. SCLMG maintained its role as the main supervisory body of the Project and provided high level support when needed. The application of the existing mechanisms and procedures for Project management, using the existing PMU, which was fully equipped with the technical, fiduciary, and other specialists, were considered satisfactory and were continued under the AF.

(c) Justification of Rating for Overall Borrower Performance

Rating: Satisfactory

The overall rating for the Borrower is satisfactory. The government needed time to understand the impacts of restructuring but once the benefits became clear the government made the needed policy changes. Regional governors also came to realize the impact of farm restructuring would be beneficial and that helped to unblock the process. The implementing agency suffered from low capacity at the start but grew into its role and successfully completed all project activities. The government has continued its policy reforms with the creation of SUEIP.

6. Lessons Learned

Local Support. Support from regional leaders was very important in stimulating cooperation from local officials and interest by farmers in farmland restructuring. For example, the decision of the Chairman of the Sughd region to support farmland restructuring had a great impact and accelerated the farmland restructuring and issuance of certificates in 2014. The Project was able to quickly respond and move capacity from other regions to Sughd to deal with the demand. In accordance with the analysis of the 37,423 certificates issued by the Project throughout the country during 2014, 74.8% are from the Sughd region. The same was true in other regions though not to the same extent as in Sughd which waited until near the end of the Project to begin restructuring its farms. This is a prime example of how institutional support from the Government and the local authorities was important for the Project, and how the Project was able to respond in an agile fashion to this new demand.

Incremental approach to land rights reform. The Project demonstrated the possibilities of a long term engagement and an incremental approach to land reform – starting with a pilot for farm restructuring/privatization, moving towards full scale implementation, working on land policy and finally supporting a full-fledged land administration system. It also highlights the risks and rewards of such an opportunistic approach. It required a 10+ year commitment from the Bank, other donors and the client, but may be a more practical approach in countries that are reluctant to move immediately to full private property rights. It also demonstrates the importance of sustained, long term commitment

to a reform agenda. The Bank team, and in particular the second TTL, maintained a steady pressure on the government to continue the reforms and supported them in any way possible. A joint working group with the government and other donors also added to the commitment to stay the course. Without the additional financing agreed by the Bank and the government it is possible that immovable property registration would not have come to Tajikistan, meaning that the steady and incremental approach paid off.

Simple is better for Results Frameworks. The significant revision to the PDO and results framework throughout the Project signify not only a change in culture in the Bank towards simplicity but also a recognition that our clients need clearer, simpler indicators. The Bank has changed since the first results framework for the Project was designed in 2004-5 and the way that PDOs and indicators are designed has also changed. The focus is on clear and measurable results and simple indicators. This is particularly important in a country where all Bank documents are translated and meaning can easily be lost. The final results framework after the 2009 and 2012 restructurings provided a clearer set of measurable indicators. The fact that the Project had three beneficiary surveys to provide extensive feedback on a number of indicators demonstrates the importance of ensuring not only measurable indicators but also ones for which data is available or can be made available.

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

(a) Borrower/implementing agencies

Comments of the implementing agency – State Committee for Land Management and Geodesy:

The State Committee for Land Management and Geodesy of the Republic of Tajikistan expresses its gratitude to the World Bank for their cooperation in the sphere of land relations.

It should be noted that the Government of Tajikistan, the State Committee on Land Management and Geodesy of the Tajikistan Republic, local authorities, the PMU and other Government agencies, in collaboration with the World Bank team implemented the Land Registration and Cadastre System for Sustainable Agriculture Project (LRCSP), Grant №H758 - TJ P089566. The Project was successfully implemented. During the Project implementation all planned objectives were achieved.

Also should be mentioned, that to support activities in the framework of the LRCSP implementation satellite images with high resolution were procured and from them were produced digital orthophoto plans at the appropriate scale. These satellite images currently used in the work of the SUERIP. Also, by the LRCSP's specialists was established a nationwide geodetic network consisting of 10 geodetic points of the first class and 185 geodetic points of the second class. For further concentration of the geodetic network, 7 temporary stations have been installed. This provides a positive impact on the activities of many organizations involved in mapping and geodetic surveys.

Seven short-term training courses on GPS and GIS technologies for local specialists were conducted by the Project. 327 specialists were trained. The short-term training courses were very useful and brought economic benefits to the trained specialists.

The number of Certificates of land use rights, which protect the rights of land users and for individual households, during the implementation of Project is 122,723 units. Which provide a positive impact on the development of agriculture.

In this regard, we inform the World Bank that we have no comments and additions to the submitted Implementation Completion Report of the Land Registration and Cadastre System for Sustainable Agriculture Project.

(b) Cofinanciers

No comments were received from other donors or partners.

Annex 1. Project Costs and Financing

(a) Project Cost by Category (in USD Million equivalent) – IDA H1570

Components	Appraisal Estimate (USD millions)	At 2009 restructuring (USD millions)	Actual (USD millions)
Works	1.98	0.26	0.26
Goods	1.66	1.91	1.91
Consultant Services, including audit	0.56	0.66	0.66
Training	1.88	0.23	0.23
Grants under part B2	1.10	0.94	0.93
Operating costs	1.82	0.83	0.83
Unallocated	0.50	0.00	0.00
Construction works, goods and consulting services, including audit, trainings and operational costs ⁶	n/a	4.67	4.66
Total Project Costs	10.00	9.49	9.49 (95% of appraisal estimate)

(b) Project Cost by Category (in USD Million equivalent) – IDA H7580

Components	Appraisal Estimate (USD millions)	Latest Estimate (USD millions)	Percentage of Appraisal
Construction works, goods and consulting services, including audit, trainings and operational costs	8.90	8.92	
Grants under part B2	0.31	0.18	
Total Project Costs	9.21	9.10	99%

(c) Financing

Source of Funds	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower	0.10	0.09	90%
Local Communities	0.50	0.27	54% ⁷
IDA GRANT	20.39	20.47	100.4%

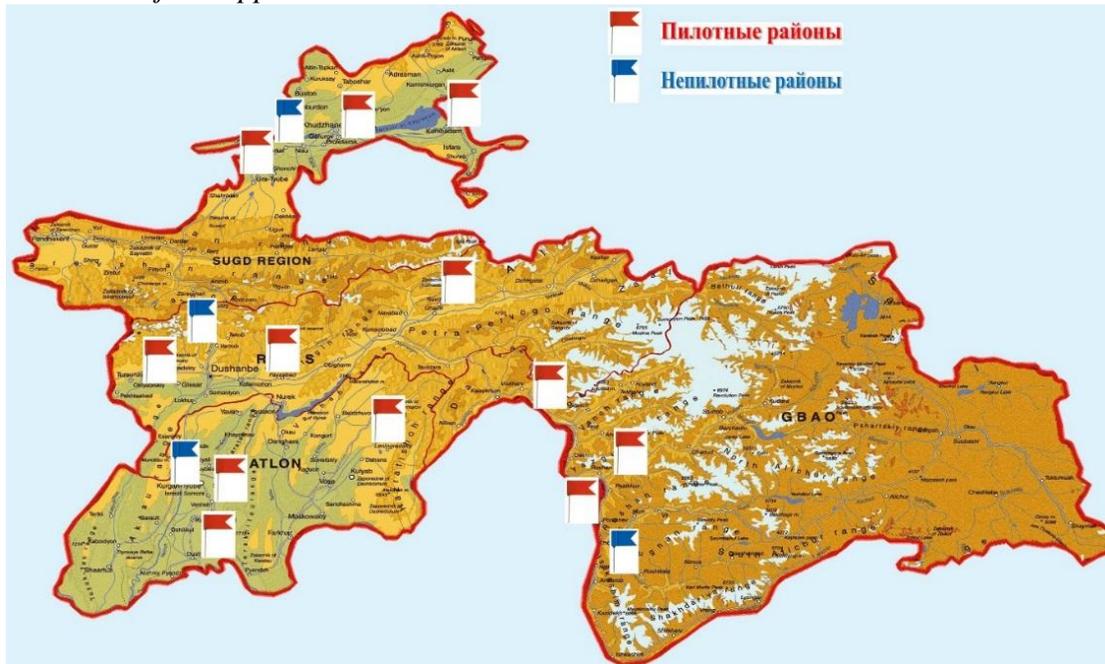
⁶ After the restructuring of July 2009, the disbursement categories were reduced to one.

⁷ This is in line with the reduction of the actual project funds spent on Grants under B2 - by some 40%. The grants financed 75% and the communities 25%; so the reduction is consistent.

Annex 2. Outputs by Component

- Component A: Farmland Restructuring and Registration of Immovable Property Rights.** This component included: (a) a continuation of the farmland restructuring in order to benefit additional rural households, (b) the issuance of land use right certificates to other land users on a demand-driven basis, and (c) capacity building support including pilots to build experience relevant for the immovable property registration system.
- Farm restructuring and issuance of new certificates. The farm restructuring activity has been completed with more than 122,723 certificates issued, and 40% of the beneficiaries were women. The majority of new agricultural enterprises being formed by restructuring are individual dehkan farms with a single shareholder named on certificates.
- Achievements under this component include:
 - A simplified one-page A4 land use certificate that can be issued regionally and printed by computer. The development of the simplified certificate eliminated the need to print certificates on special paper with a special cover in Dushanbe.
 - A computerized system for integrating GPS/GIS coordinates and orthophoto satellite images to create maps for each property, and adding a unique property number for each land certificate. This system attaches the coordinates and images to the simplified certificate and helps prevent fraud.

Figure 1-1. Map Showing Project Areas. Red Indicates the 12 Raions where the Project Issued Certificates. Blue Indicates Control Raions where SCLMG issued certificates without Project support



4. Pilot Registration Offices. The development of the pilot registration offices has also been completed. All four pilot offices (in Kulob, Khujand, Gissar, Badakhshan) began their operations and have since been absorbed into SUERIP which is the only authorized state body to carry out registration. The Project has contributed equipment and trained staff for SUERIP and has supported progress in the preparation of procedures, and a manual for systematic and sporadic registration.

5. The Project also supported the preparation of registration procedures and work manuals, leading to the adoption of the Resolution of the Government of Tajikistan on "Procedures and peculiarities of the state system registration of immovable property and rights to it," dated October 04, 2013, under the number 447, and the Decision of the SCLMG, dated June 06, 2014, under the number 24, on the "Rules, the procedure for registration, maintenance and forms of registration files, registration books, application books, and assignment of individual cadastral numbers of immovable property.

6. Cadastral System Development. LRCSP has assisted with the development of a nation-wide cadastral system in support of sustainable agriculture and real estate registration. One urban and seven rural Regional Cadastral Centers (RLCC) were established in strategic locations throughout the Republic. The centers were rehabilitated and equipped with modern surveying and mapping equipment and staffed with trained specialists to provide cadastral services to their local constituents. The main service of the centers was to assist with the farmland restructuring of the large state and collective farms into family and individual dehkan farms. The RLCCs have been transferred to the new SUERIP to support real estate registration.

7. To support the RLCC activities the LRCSP procured high resolution satellite imagery and provided digital orthophotos, at appropriate scales. The project set a goal of providing 39,000 km² of new coordinates and orthophotomaps for the total territory including spatial databases that can be used for land reorganization and other purposes. The actual territory covered as of September 30, 2014, was 43,100 km², including 100% of flatlands, which exceeds the target. In addition, an additional 4,100 km² has been acquired and is in use for immovable property registration. The orthophotos were used as a base on which to overlay boundaries to show the spatial relationship of all dehkan farms created under the LRCSP. The orthophotos can also be used for multiple applications of spatial data including transportation and other infrastructure planning, natural resource management and real estate registration.

8. The LRCSP, through the SCLMG, installed a nation-wide geodetic network consisting of 10 first order stations and 185 second order stations as a spatial reference system for all mapping activities in Tajikistan. To further enhance the geodetic network, 7 CORS stations have been installed. A CORS network is a network of GPS receivers that are used to supply satellite signal corrections to users of global navigation satellite (GPS) systems. The corrections are necessary to accurately locate, in real time, points on the surface of the earth and are used for all forms of surveying. Users typically access the CORS through an internet connection. The network is a system that should be promoted as a resource for all surveying and mapping applications within Tajikistan. The CORS

stations are located such that the network will provide the maximum coverage for areas of most intense development activities within Tajikistan. The maintenance is being provided by the local SCLMG offices in each rayon.

9. Policy analysis and investment planning. SUERIP is a recently established entity consisting of the registration component of the Bureau of Technical Inventory and the registration component of the MZ and is responsible for the implementation of a unified immovable property registration system throughout Tajikistan. This initiative will require significant investment in the development of human resources, creation of facilities, establishment of equipment and technology and the collection and maintenance of immovable property data. A well thought out investment plan is required to guide the SUERIP through this long term and immense undertaking. The investment plan was prepared under the LRCSP with participation of SUERIP and formed the basis for preparation of the RERP.

10. **Component B: Information for Immovable Property Users and Irrigation Support.** This component included three distinct subcomponents: (i) continue to provide information for farmers and other immovable property users; (ii) continue the on-farm irrigation and water management support through the grants to Water User Associations for rehabilitation; and, (iii) continue to build capacity in environmental land management.

11. Information for Farmers. This activity included the awareness raising and farm management training activities for farmers. The Project continued its awareness raising activities which resulted 301,829 farmers trained on immovable property rights and the process of farm restructuring, and 16,740 heads of newly established dehkan farms were trained in effective farm management.

12. Training and informational activities were especially heavy during 2014, when 149,889 – almost half the total – were trained. Included in this total are systematic training workshops held to inform farmers about upcoming restructuring of their farms as well as more general mass media and educational campaigns. In 2013 and 2014 information and awareness-raising activities were carried out on 186 large scale collective dehkan farms in 14 raions. Training included a wide spectrum of those impacted by restructuring, including disabled persons, pensioners, housewives, female heads of the households, youth, the unemployed and others. Printed materials included:

- 80 brochures (84,887 copies)
- 43 booklets (41,000 copies)
- 11 bulletins/newsletters (7,550 copies)
- 24 posters (4,400 copies)

A total of 140,637 copies of materials were produced. In addition, 14 TV and 14 Radio programs were prepared during 2013-14, and 20 newspaper articles also were prepared in 2014. Since 2009, 70 newspaper articles have been prepared.

13. As a result of farm restructuring, many men and women who become heads of Individual or Family Dehkan farms lack management experience and knowledge needed to deal with agricultural production, environmental sustainability, legal issues, marketing and other matters. For this reason, training was provided from 2007 to 2014 to a total of 16,740 dehkan farm heads and specialists from Individual and Family Dehkan farms. In 2014 alone, 2,070 farm heads were trained in 82 groups and 6 raions. For this indicator, no target number was set. Topics included:

- Legal aspects, rights, and tax issues;
- Effective management methods including drafting a business plan, accounting and reporting systems;
- Agricultural marketing;
- Techniques and technologies for farming crops and livestock; and
- Farm credit, including creation of credit unions

A total of 201 specialists were trained by the Project in immovable property registration during the period via an NGO that was hired to carry out the work.

14. On-farm Irrigation and Water Management. As a part of the Project, 73 Water User Associations were created in areas where at least 70% of the farmers had received certificates from the Project. These WUAs were created for three purposes: (1) to link farmers to the Water Authority (Vodkhoz); (2) to help ensure proper distribution/sharing of water; and, (3) to assist in reconstruction and maintenance of water systems.

15. Working with members of the WUAs, the Project met its target of assisting in restoring and rehabilitating 12,158 ha of land. Most of them continue to function even after Project support ends. Members of the WUA pay an annual membership fee, and the WUA then helps coordinate irrigation water services, and deals with the Water Authority. WUAs also organize local canal-cleaning activities, and some also provide additional services such as drinking water. In the 73 WUAs, the Project paid 75% of costs for critically needed purchase and repair of pumps, cleaning canals, and bridge repair, and farmers paid 25%. In focus groups, WUA members acknowledged that some sort of mechanism is needed to allocate irrigation water, clean canals, and maintain equipment. However, a lack of an effective metering system and problems cleaning main canals were cited as major problems.

16. Environmental Land Management. Environmental problems such as declining soil fertility, soil erosion, rainfall variability and drought were ranked among the top 10 problems by farmers in the 2014-15 survey. Yet the problem of providing information and coordinating environmental activities among farmers has been greatly complicated by the 10-fold increase in the number of farmers and the division of lands.

17. The Project launched a creative initiative to call attention to environmental problems and solutions by holding contests to select the farmer with the best environmental practices. Winners got a cash prize, but also agreed that their farms would become the sites for environmental training sessions in each raion. 150 of these

demonstration plots were documented. Significant mass media and official attention was focused on these events.

18. A total of 1,075 farmers and specialists were trained in 50 raions. Emphasis was placed on environmental practices that would not only lead to sustainable agriculture, but also would increase profits and yield for farmers. Training also focused on methods so those trained could use to increase visibility of environmental issues and provide future training. “Honey days” or “melon days” could be used to call attention to events where specialized training and support could be provided. A workbook was created showing details on environmental problems and solutions, and this was a key document during training sessions. The analytical report on the results of the trainings on environmental land management was prepared and published for dissemination. The “Guidelines for environmental assessment in the land parceling practices” has also been completed and published.

19. **Component C: Project Management.** The PMU for the Project was established with the commencement of the Project, and was responsible for the following functions: i) planning and budgeting; ii) procurement; iii) financial management and disbursements; and iv) monitoring and evaluation for the Project. The PMU also managed the technical staff in the RLCCs.

20. The PMU maintained and delivered accurate and up-to-date accounting records for the Project through the quarterly IFRs and annual audit report (audited by external audit company). The 1C accounting system, which could automatically generate the required quarterly financial management reports and Statement of Expenditure forms, was installed.

21. The M&E, managed by the PMU, was responsible for monitoring the project implementation process and its outputs, and for reporting to the GOT and the Bank on project progress. The M&E specialist under the Project provided regular quantitative quarterly progress reports on the project progress, and the statistics on the progress with meeting project outputs and outcome indicators.

Annex 2.B

PDO Indicators: Original and Revised

Original Indicator	Revised Indicator - AF	Comments
At least 75,000 certificates issued to family farms in accordance with agreed standards.	Number of use rights certificates that strengthen tenure security for families and small businesses in accordance with agreed standards. ⁸	New target set at 112,000.
Not applicable	Completion of a proposed plan to improve immovable property registration that meets agreed criteria.	Expansion of scope to include the proposal for the improvements of the property registration system.
At least 75% of rural population in the 36 participating raions, including vulnerable groups, are well informed about land law and procedures governing farm privatization.	Percent of households in the project areas who have at least one member who has basic understanding about land use rights and farmland restructuring for family farms.	“Basic understanding” more precisely corresponds with data from 2007 and 2011 Studies. New target set at 67%.
Not included.	Percent of rural households who strongly agree that they make their own farm management decisions about what to plant on their dehkan farm plots.	New indicator. Target set at 50%.
Value of agricultural production per ha increases by 5%.	Percent of households who perceive that increased income is a very important reason for restructuring farmlands into family holdings.	Seen as a better indicator of goals of the project. Target set at 70%.
At least 10,000 ha of agricultural lands restored through-farm irrigation and water management rehabilitation, and covered by well-functioning water user organizations.	Shifted to intermediate outcome indicator – Comp. B2.	

⁸ “Agreed standards” refer to certificate issuance and associated activities through a process that is socially inclusive, transparent, and regarded as fair by local inhabitants, and that reflects good conflict management practice, takes into account current land use (rather than prescribed land use based on out-of-date maps and government instructions) and that is increasingly efficient.

Original Indicator	Revised Indicator - AF	Comments
At least 3,600 farmers better informed about integrated pest management through exposure through field demonstrations and participation in training.	Dropped as part of 2009 restructuring with shift to overall agro-environmental focus in Comp. B3.	Intermediate indicators on training in environmental management included.
Project reputation for integrity as reflected in public opinion surveys.	Dropped as part of 2009 restructuring; surveys more focused on understanding farmer behaviors.	
Increased understanding of policy issues and increased consensus on long-term vision among senior policy makers, as demonstrated in reform initiatives and plans.	On-going activity but not included as an outcome indicator after 2009 as no clear measurement provided.	
Measured as indicator for Component A (i).	Core Indicator for Project Beneficiaries: Part- a: Number of shareholders covered by certificates issued (cumulative). Part b: of which female (cumulative).	Reference to number of shareholders with certificates rather than number of shareholders on applications better reflects the full process. Addition of gender sub-indicator is in accordance with Bank core indicator requirements.

Annex 3. Economic and Financial Analysis

(including assumptions in analysis)

1. The agricultural sector in Tajikistan is crucial to the economy of the country, providing employment for approximately half of the population, and 48% of household incomes. A collapse of the Soviet-style farming system occurred when Tajikistan became an independent country following the breakup of the Soviet Union. The centrally funded and controlled farming system consisted of large state and collective farms operating as part of a planned economic system that centrally determined and controlled every aspect of farming, especially for cotton – a major export crop – and wheat, the basic grain for food consumption in the country. Following the collapse of the central system, a decision was made to privatize land use rights in 1992, and was extended in 1996 to provide individuals and families with the opportunity to reorganize the state and collective farms into “dehkan” farms with the state/collective farm workers as shareholders.

2. With the collapse of state and collective farms came a dramatic decline in access to and use of tractors and other farming equipment, as well as the ability to maintain the country’s irrigation system pumps, pipes and canals. Soviet agriculture was heavily mechanized and large scale, while dehkan farm agriculture is much smaller scale with an emphasis on human labor. To deal with these factors, a robust land policy, sensibly articulated and diligently implemented, was thought to be fundamental to the revitalization and transformation of agriculture and the rural economy. Decisions concerning land – how it is allocated, how it is used, how it is governed, how it is administered, and how it is financed – plays a central role in determining the shape of Tajikistan’s economic and social future.

Original Assumptions and Ex-Post Analysis

3. At the original Project’s appraisal, the Project was considered as economically and financially sound. The economic Net Present Value (NPV) over the first 20 years of project life comprised US\$2.33 million, assuming a discount rate of 12%. The Economic Internal Rate of Return (ERR) and the Financial Rate of Return (FRR) were, 26% and 21% respectively. The main benefits that were envisaged to occur at appraisal were through increased value added of agricultural activities (crop production) through a broadly enabling access to land by the farm workers of the state and collective farming entities. This was considered as a conservative estimate, since increases in value added of livestock production were not calculated and added in the original analysis. That said, the economic analysis at appraisal did not include a clear description of the hypothesis and economic/financial model used for the above calculations. Moreover, irrigation investments in the unreformed agricultural enterprises, whose on-farm irrigation and drainage network was in a state of disrepair, were also included in the calculation of the overall project benefits.

4. Several studies of the agricultural sector in former CIS countries have demonstrated that the value added per hectare of privatized farms is considerably greater than that of large collectively held, or state, farms. This fact and the evidence that has

been accumulated in regard to small farm productivity was the basic economic reasoning behind the design of the Project. Since small farmers produce more per unit of land than do larger farmers, land privatization and reform has the potential to enhance land efficiency. In the case of Tajikistan, privatization to farm workers would also equalize the size distribution of land holdings and reach the great majority of the rural population, thus contributing to equity, and as a result, poverty alleviation. The main theoretical economic rationale of the Project theorized that collective ownership weakens the linkages between effort and income thereby diminishing incentives for an intensive labor input as well as disheartening farmer attempts for a more efficient allocation of inputs. Empirical evidence from other countries (China, Vietnam, Kyrgyzstan) was used to document that farm restructuring reform accounted for a dominant share of the dramatic gains in labor and land productivity.

5. The Project intended to reduce the cost and hurdles related to farm restructuring and, most importantly, create an incentive structure appropriate to the agricultural market. On average, in Tajikistan, modeled agricultural value added of private farmers on a per hectare basis (incremental family labor earnings and gross margins) was 15% higher than that of unreformed agricultural enterprises. The use of farm labor was projected to increase by 35% (except for cotton), and despite a decrease in application of off-farm inputs (25%), crop yields were expected to increase by 10%, including benefits from the Project's investments in irrigation.

6. The original Project's analysis claimed that the benefits of enabling access to land were to be a one-off gain with the growth in the value added of private farming reaching its maximum by the third year of private operation. Subsequently, the growth rate was expected to become more modest (1% per annum on average) as financial and other constraints (farm finance, inputs, and extension) would become more binding for the expansion of value added from crop production.

7. A sensitivity analysis was also carried out at the original Project's appraisal, which suggested that the Project's benefits were reasonably robust to a simulated increase in the cost of material inputs, drop in the price of crop products or increase in investment costs. Environmental benefits were expected to be substantial over the long-term as households were expected to switch from cultivating land tracks not well suitable for agriculture to regular land under cultivation; yet these benefits were not calculated. The original Project's analysis claimed that project benefits were to be overwhelmingly pro-poor as the main beneficiaries of the Project (agricultural wage workers) are strongly associated with lower than average levels of welfare. The fiscal benefits over a period of 20 years were estimated at \$0.5 million, using the prevailing tax rates at the time. This assumed an unchanged level of taxation in agriculture on incremental agricultural output. Adding the benefits of increased employment to the original Project's analysis, the additional fiscal benefit was calculated at \$3 million.

8. A separate and updated economic and financial analysis was not conducted for the Additional Financing in 2012, despite the fact the additional financing was for an additional US\$10 million (equal to the amount of the original Project). It is important to note that the Project PDOs did not require direct measurement of economic impacts that

farm restructuring and issuing certificates would have on farmers, although it was clearly expected (even from the initial PAD) that significant changes in farming practices were expected to occur as a result. For example results from the 2003-2005 initial pilot project reported almost a doubling of agricultural production on reorganized plots, while production on neighboring collective farms did not change. That said, data collected during the 2006 baseline, the 2011 farmers and farm worker perceptions study, and the 2014-15 survey all included material that could be used to track certain economic impacts.

9. The Government of Tajikistan (GOT) was asked to submit data that was used for the original economic analysis however due to data availability limitations, the original analysis could not be replicated. With such data limitations a Net Present Value (NPV), Economic Rate of Return (ERR) and/or a Financial Rate of Return (FRR) could not be calculated. Instead, this economic analysis has greatly benefited from the GOT final Project evaluation, conducted by an international consultant. The analysis and data presented in this Annex are mainly derived from Project data, as well as three studies: (i) a baseline study completed in 2007, (ii) a 2011 study of farmer perceptions of land restructuring that examined progress in restructuring and its impacts (with inputs from numerous other studies carried out by the World Bank, the GOT, donors, and NGOs), and (iii) a final survey of 1,600 beneficiaries/farmers in 16 raions in each of the four regions of the country that was completed in 2015. The methodology of the three surveys can be considered consistent, although the baseline survey focused on collecting data from farmers that had not received land certificates and the final survey focused on those farmers that did.

Table 1: Key Economic and Fiscal Impacts (PAD Assumptions v. Project Outcomes)

PAD Assumptions	Project Outcome
Transaction costs for farm restructuring and property registration will be reduced both in terms of cost, time, and overall hurdles (efficiency)	In 2003, the average reported number of weeks required to register a private farm was 11.9 weeks, and the average reported cost of registering a private farm was US\$242 (671 somoni). Through the Project's support to seven regional centers and one additional urban center, the simplified registration system managed to reduce the processing time from 157-176 days under the existing system to only 30 days. In the final Project Completion Report the cost was reported as US\$37 per certificate, a significant reduction from the original pre-Project costs.
Create an incentive structure appropriate to the market structure of Tajikistan's agriculture (structural)	The Project has created an enabling incentive structure for Tajikistan's agriculture that is based on higher agricultural investment and freedom to respond to market forces. Evidence suggests that the strengthening of land

	tenure through the Project interventions led to enhanced agricultural investment (see section I.C). Freedom to farm was also rated as the single most important reason for land restructuring, according to the Project beneficiaries (see section III.A), which had significant impacts on crop diversification that allowed farmers to respond to market forces and create a more efficient safety net for them (see section III.B).
Use of farm labor projected to increase by 35% (output)	Approximately 30% of Individual Dehkan farmers “strongly agreed” that they were using more of their own labor and also hiring more labor on their farms. For Family Dehkan farms, more than 40% “strongly agreed” they were hiring more labor. When combining “somewhat agree” and “strongly agree” categories, approximately three-fourths of farmers are using more of their own labor and hiring more labor.
Fiscal benefits over a period of 20 years were estimated at US\$ 0.5 million, with an unchanged level of taxation in agriculture on incremental agricultural output, or \$3 million if taking into account the benefits of increased employment (structural/output)	According to data made available by the Tajik tax authorities, there has been a significant increase in the collection of land taxes over the past years. Using Khatlon province as a proxy, given that its population is significantly agricultural by vocation, tax collection between 2011 and 2014 alone increased by US\$0.7 million (or a 53% point increase). Whilst it is not possible to attribute the entirety of this fiscal benefit to the Project, even with the most conservative estimates the national fiscal benefit over a period of 20 years would exceed the original estimate of US\$0.5 million.
Small farm productivity will increase due to enhanced incentives for agricultural investment (structural/output)	Studies suggest that the land reforms supported by this Project have contributed to increased small farm productivity ⁹ .

⁹ For an assessment of the impact of early land reforms on productivity, see Robinson, S. et al. “Land Reform in Tajikistan: Consequences for Tenure Security, Agricultural Productivity and Land Management Practices – Consequences of Land Reform in Tajikistan.”

Privatization to farm workers will equalize the size distribution of land holdings (structural)	The privatization of large state-owned farms has led to a more equitable distribution of land in Tajikistan. The fact that land use certificates are only inheritable, and not transferrable, has increased the difficulty of gaining large land acquisitions.
Environmental benefits are expected to be substantial over the long-term, since households were expected to switch from cultivating land tracks not well suited to agriculture to regular land under cultivation (structural)	The Project launched creative initiatives to raise attention to environmental issues by holding contests to select farmers that employed good environmental practices. Winners received cash prizes, but also agreed that their farms would become sites for environmental training sessions in each raion. Significant media and official attention was focused on these events. A total of 1075 farmers and specialists were trained in 50 raions. Emphasis was placed on environmental practices that would not only lead to sustainable agriculture, but would also increase profits and yield for farmers.

I. Output Effects

A. Issuance of Land Use Rights Certificates

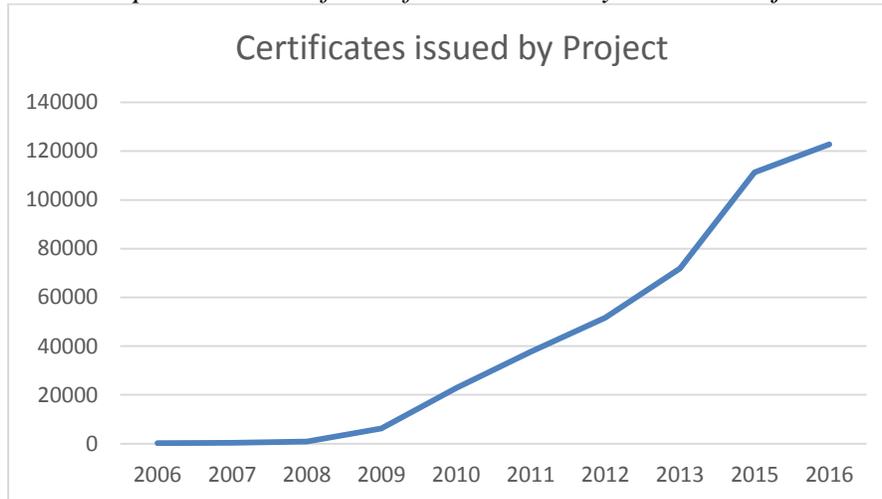
10. The Project has surpassed its original goal of issuing 112,000 certificates for Individual and Family Dehkan farms, and managed to issue 122,723 certificates. This is a major accomplishment considering the fact that 62% of those certificates were issued during the AF. Initially, the need to develop, test, and gain approval for use of a new cadastral system, plus legal and regulatory delays in approving and developing procedures for the new system, meant that the Project fell behind in its goals. Of the 122,723 certificates, approximately 63% were issued to Individual Dehkan farmers (one name on the certificate) and the remaining approximately 37% were issued to Family Dehkan farmers (head plus shareholder names on the certificate; less than 25 total shareholders). Overall, a total of 357,647 persons have benefited from the issuance of land use rights certificates.

11. Calculations using survey data and project statistics suggest that the total amount of arable land covered by the 122,723 certificates is approximately 216,244 ha. Furthermore, it is estimated that there is a total of 676,800 ha of available arable land¹⁰

¹⁰ Total arable land amounts to 720,000 ha, yet 6% of that land is already allocated to household and presidential plots.

out of 720,000 ha of arable land in the country, 6% of which land is already allocated to households. Hence, through the Project approximately 31.9% of Tajikistan’s arable land has been distributed through land use rights certificates. Households on other farms have also received certificates through the SCLMG, therefore the total amount of land covered is actually higher.

Graph1. Number of Certificates Issued by LRCSP Project



12. All respondents, whether Project beneficiaries or not, suggested that the process for receiving a certificate through the Project was easier than the previously available procedure. Table 2 shows reasons why farmers preferred the Project certificate approach. In qualitative comments, farmers emphasized that Project certificates were free of charge, were issued quickly, and did not require multiple trips to many separate offices. Results in the table show that being free of charge and quick, and having Project staff handle procedures, were the most-recognized advantages. In terms of sustainability and in the absence of Project financing for issuing certificates, it is expected that households would still see benefits in the issuing of certificates due to the overall improved procedures, improved coordinate system for surveying and improved capacity of staff (please refer to income and overall certificate perceptions below).

Table 2. Percent of Survey Respondents' Seeing Advantages of Receiving a Certificate through the Project.

	Individual Dehkan Farmers		Family Dehkan Farmers	
	LRCSP Project	Non-Project	LRCSP Project	Non-Project
Certificates are free	99.4	99.3	100	100
Issued more quickly	94.8	96.6	97.6	100
Project staff implement all procedures	94.4	97.9	95.2	100
GPS identifies boundaries	69.6	78.3	83.6	99.1
No additional payments to officials	78.7	83.4	87.4	100
No need to travel from one office to another	83.2	85.9	90.8	100

B. Income and Income Perceptions

13. A reorganized agricultural sector would be expected to increase investments in agricultural infrastructure and production, leading to more employment opportunities, greater agricultural production, and higher farm income. In fact, one justification for the Project subsidizing the cost of issuing certificates to farmers has been that the resulting stimulus would lead to increased overall government revenues that would more than offset the costs.

14. It should be noted that in 2007, when the baseline survey was conducted, very few farms had been restructured. It was thought that there would be no way to assess farm income for those who had not yet received land. For this reason, the relevant Project indicator focused on a perception by those contemplating reorganization that an increase in farm income would be a motivating factor to apply for a restructured farm. Yet the final evaluation survey asked a representative sample of Project beneficiaries both about what had actually occurred to their incomes before and after the issuance of certificates (income question), as well as about the potential strength of income as a motivating factor towards the issuance of a certificate (income perception question).

15. For the income question, farmers were asked to agree or disagree with the statement: "Having a certificate has increased my household's farming income." They could strongly disagree, somewhat disagree, somewhat agree, or strongly agree with the statement. Table 3 shows that 74.3% of Individual Dehkan farmers and 73.9% of Family Dehkan farmers selected either somewhat agree or strongly agree, hence an ample majority of farmers on both types of farms maintain that having a certificate has led to increased farm income.

Table 3. Percentages of Individual and Family Dehkan Farmers Who Agree or Disagree that Their Farming Income Has Increased Because of Receiving a Certificate.

	Strongly disagree	Disagree somewhat	Somewhat agree	Strongly agree	Don't know
Individual Dehkan Farmers (n=1063)	5.8%	18.7%	35.6%	38.7%	1.2%
Family Dehkan Farmers (n=430)	4.2%	21.9%	36.5%	37.4%	0

16. Another proxy used to assess income effects was the ownership of various household possessions. The next table (Table 4) compares general results for ownership of a list of household possessions across three survey time periods. Results strongly suggest that farmers are becoming more prosperous over time. There have been dramatic increases in mobile phone ownership, satellite TV systems, power generators, and ownership of cars. These may have been purchased using money from migrant remittances or other sources rather than agriculture, but data elsewhere in this report show agricultural income is increasing over time, arguably at least partially due to land restructuring.

Table 4. Percent Ownership of Household Possessions by Year.

	2007	2011	2014-15
Carpet	85.5	93.9	97.5
Radio	49.8	37.6	42.9
Tape/DVD player	40.4	74.0	60.0
Mobile phone	25.6	86.4	91.2
Color TV	54.0	86.9	92.3
Fridge	23.7	25.3	60.9
Washing machine	14.6	10.0	29.8
Sewing machine	50.0	59.1	52.3
Air conditioning	3.9	5.1	15.4
Power generator	3.8	14.6	33.1
TV satellite receiver	6.5	30.2	81.8
Bicycle	24.1	32.4	29.4
Motorcycle	3.6	2.5	10.4
Car	24.2	40.8	55.0
Lorry	4.3	6.8	15.9
Tractor	7.1	6.8	15.9

17. The PDO Indicator 5 called for 70% of farmers to state that the ability to earn higher income was a “very important” factor that would make farmers want to apply for their own Individual or Family Dehkan farms. Survey results show that 40.1% of farmers said that income was a “very important” factor in the Project’s final survey.” When “somewhat important” and “very important” are combined, 79.2% indicate that income is important.

18. Table 5 shows the percentage of farmers selecting “very important” for each of the four motivating factors for 2007, 2011, and 2014-15. For 2014-15, results for “somewhat important” are also shown. Based on the trajectory of answers between 2007 and 2011, a target PDO value of 70% “very important” was set for 2014-15. No single motivating reason received 70% “very important” ratings. Income is clearly seen as about as important as other factors such as freedom to plant what they want, security of inheritable rights, and ability to farm independently. However, when the “somewhat important” percentages are included, all four of the items, including income, exceed the 70% value. Thus, a conclusion would be that despite the fact that the 70% “very important” rating was not achieved, income is a factor that is clearly as important as other major factors.

Table 5. Perceptions of Factors that Would Motivate Farmers to Leave a Collective Farm and Establish an Individual or Family Dehkan Farm. N=-1600.

Motivating Factor	2007 very important reason	2011 very important reason	2014-15 somewhat important reason	2014-15 very important reason
Get secure rights to piece of land that can be passed on to wife/husband or children	49.3%	66.9%	28.1%	46.6%
Could farm independently	34.5%	64.7%	27.4%	53.8%
Freedom to plant whatever they want	37.1%	64.1%	37.4%	42.5%
Earn higher income from independent farming	45.1%	57.3%	39.1%	40.1%

19. Table 6 shows how farmers rate “earning higher income” as a reason for creating a restructured farm. Results for this variable have been relatively stable over time, yet almost 80% rate income as either somewhat or very important.

Table 6. Percent of Farmers Who Say Ability to Earn Higher Income Is an Important Reason for Creating a Restructured Farm.

	2007	2011	2014-15
Not at all important reason	1.5	6.0	3.8
Not very important reason	8.7	7.1	15.9
Somewhat important reason	43.7	31.5	39.1
Very important reason	41.2	55.3	40.1
Don't know	5.0	0	1.2

C. Agricultural Investment

20. A general premise of interventions that support land tenure strengthening is that more secure land tenure incentivizes investment because households do not need to use valuable resources to protect their property, and take a longer-term investment perspective. In fact, the level of investment in the Project areas has increased sharply

since implementation began. There is also evidence that farmers are thinking about their farming activities more as a business, having received training and support for such planning by the Project. More than half of the beneficiaries report that they have developed a business plan for their farm. This represents a sharp increase over the 18% that did so in 2011 (first survey that included this question). Table 7 shows that almost half of farmers have either purchased or rented tractors or other mechanical equipment, and more than half have invested in repairs of their irrigation systems. Although other exogenous factors influence access to agricultural inputs and investments, these results may be at least somewhat attributable to the Project, as Tables 8 and 9 suggest.

Table 7. Investments in Agriculture: Comparisons between 2011 and 2014.

	2011 % investing	2014 % investing
Repair of irrigation systems, pumps, canals	30%	56%
Purchase or rental of tractors or other machinery	14%	48%
Rental of horses or other animals for ploughing	6%	36%
Construction of agriculture buildings	8%	25%
Construction of fences	26%	24%
Prepared a business plan	18%	55%

*Table 8. Percent of **Individual** Dehkan Farm Certificate Holders by Changes in Agricultural Activities as a result of Receiving a Certificate.*

Question: Having a certificate has caused my household to.....	Strongly Disagree	Disagree Somewhat	Somewhat Agree	Strongly Agree	Don't Know
Spend more money on agricultural activities and the farm	8.7	12.7	33.6	44.8	.3
Use more of its own labor	5.5	19.7	42.7	31.6	.6
Hire more labor	7.3	18.6	44.5	28.2	1.3
Increase my household's farming income	5.8	18.7	35.6	38.7	1.2
Increase agricultural production	4.7	21.3	32.1	40.5	1.5
Major changes in farming methods	8.7	20.2	36.1	33.9	1.1
Major changes in crops grown	5.6	18.0	35.5	39.5	1.5
Improve my quality of life in the community	4.8	18.0	33.8	42.2	1.2
More opportunities for training, seminars and other events	3.3	12.9	32.7	50.1	.9
Improve my respect in community	4.4	19.3	31.0	43.9	1.3

Table 9. Percent of **Family** Dehkan Farm Certificate Holders by Changes in Agricultural Activities as a Result of Receiving a Certificate

Question: Having a certificate has caused my household to.....	Strongly Disagree	Disagree Somewhat	Somewhat Agree	Strongly Agree	Don't Know
Spend more money on agricultural activities and the farm	2.1	10.7	50.0	37.2	0
Use more of its own labor	1.6	26.7	41.9	29.8	0
Hire more labor	1.9	18.8	37.9	40.9	.5
Increase my household's farming income	4.2	21.9	36.5	37.4	0
Increase agricultural production	4.9	17.0	41.9	35.8	.5
Major changes in farming methods	5.1	26.5	40.2	26.7	1.4
Major changes in crops grown	3.0	22.1	36.5	37.9	.5
Improve my quality of life in the community	4.7	15.3	36.7	42.3	.9
More opportunities for training, seminars and other events	1.2	13.7	33.3	50.7	1.2

D. Employment

21. According to the original analysis, individual private farms employ more labor per hectare than do larger agricultural enterprises. Labor application in private farms in 2003 was greater by more than a third than the same in unreformed agricultural enterprises, given that these enterprises relied on large-scale mechanized agricultural inputs.

22. Approximately 30% of Individual Dehkan farmers “strongly agreed” that they were using more of their own labor and also hiring more labor on their farms (see Table 10). For Family Dehkan farms, Table 6-3 shows more than 40% “strongly agreed” they were hiring more labor. Again, when combining “somewhat agree” and “strongly agree” categories, approximately three-fourths of farmers are using more of their own labor and hiring more labor.

Table 10. Percent of **Individual** Dehkan Farm Certificate Holders by Changes in Agricultural Activities as a result of Receiving a Certificate.

Question: Having a certificate has caused my household to.....	Strongly Disagree	Disagree Somewhat	Somewhat Agree	Strongly Agree	Don't Know
Use more of its own labor	5.5	19.7	42.7	31.6	.6
Hire more labor	7.3	18.6	44.5	28.2	1.3

Table 11. Percent of **Family** Dehkan Farm Certificate Holders by Changes in Agricultural Activities as a Result of Receiving a Certificate

Question: Having a certificate has caused my household to.....	Strongly Disagree	Disagree Somewhat	Somewhat Agree	Strongly Agree	Don't Know
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Use more of its own labor	1.6	26.7	41.9	29.8	0
Hire more labor	1.9	18.8	37.9	40.9	.5

II. Sectoral Efficiency Gains

23. Through the Project’s support to seven regional centers and one additional urban center, the simplified registration system managed to reduce the processing time from 157-176 days under the existing system to only 30 days. The simplified system also resulted in substantial cost savings, eliminating the need for special printing on special papers, and in most cases empowering the regional centers to issue the certificates rather than routing them through Dushanbe. It should be noted that the economic analysis focuses mainly on sectoral efficiency rather than the Project’s efficiency, given the data limitations. The sectoral efficiency approach has been widely used for the ex-post analysis of comparable Bank land administration operations.

A. Cost Reductions

24. Prior to the Project, an International Finance Corporation (IFC) study found that the cost of issuing a certificate was US\$242 (671 somoni). Project data (through focus group research in the 2007 baseline study, 2011 study, and the final evaluation) also maintained that costs were still in the hundreds of dollars for issuance of certificates through the traditional process. The \$25 intermediate indicator estimate was envisioned to include “direct” costs – the costs of actually preparing, processing and issuing a land use rights certificate – and did not include “indirect” costs such as the development of the cadastral system infrastructure, the cost of computers (or other equipment), and other policy/administrative developments necessary to make the process function smoothly. Initial cost figures reported by the Project were much higher than \$25, ranging from \$36 to \$50 per certificate. In the final Project Completion Report the cost was reported as \$37 per certificate.

25. It is worth noting that the cost of US\$37 per certificate (the current cost figure) is a significant reduction from the original pre-Project costs. The simplified certificate printed on a simple A4 paper reduced costs by \$3 per certificate, and not using the traditional heavy paper and traditional cover saved an additional \$7.30 per certificate. Thus, although the target of \$25 per certificate has not been met, the Project made important strides in reducing costs, and these cost-reduction steps have now been adopted by the SCLMG as well and will apply to certificates issued in the post-project phase.

B. Reduction in Time Required for Certificate Issuance

26. The Project achieved a reduction in the time needed to apply, process and receive a land use right certificate. A combination of factors, including assisting farmers in applying for certificates, handing application materials to farmers (in order for them not

to have to visit many different offices), creating a computerized system that includes GPS coordinates, orthophotos, and a unique parcel number; gaining approval for certificates to be issued at regional offices in most cases rather than taking them to Dushanbe, and creation of a new simplified A4 certificate form, all contributed to reducing the time required for the issuance of a new certificate.

27. Responses from the 1,600 farmers surveyed in the Project’s final evaluation confirmed that the Project was able to dramatically reduce the time needed to apply, process and receive a certificate. Table 12 shows that farmers receiving Individual Dehkan farm certificates from the Project waited only 30 days to receive their certificates, compared to 157 days using the old process. Farmers in areas where the new system processes have not been introduced waited for an average of more than 5 months, and paid an average of 925 somoni (about US\$184 at 5 somoni per dollar). Results shown in Table 13 are similar for Family Dehkan farmers. Project farmers waited only 30 days to receive their certificates, while non-project farmers waited 178 days and paid 730 somoni (US\$146 at 5 somoni/dollar).

Table 12. Results for Individual Dehkan Farms. Comparisons Between LRCSP Project-Issued Certificate Farmers and Non-Project Farmers for Time and Cost.

	Number	%	Average number of days needed to receive certificate	Average cost to receive certificate, including fees and transportation (in somoni)
LRCSP Project Farmers	771	72.5	30	30.5 (87.5% said zero)
Non-project Farmers	292	27.5	157.3	924.9

Table 13. Results for Family Dehkan Farms. Comparisons Between LRCSP Project-Issued Certificate Farmers and Non-Project Farmers for Time and Cost.

	Number	%	Average number of days needed to receive certificate	Average cost to receive certificate, including fees and transportation (in somoni)
LRCSP Project Farmers	207	48.1	30	0
Non-project Farmers	223	51.9	178.1	730.1

C. Technology Advancements and Institutional Enhancements

28. The Project worked to establish a new geodetic coordinate and network system that would enable land certificates to include specific coordinates for each piece of land. It also included acquisition and use of satellite images for the flatter areas of the country. The major economic advantages of the new system for farmers were to clearly identify parcels in a way that would avoid future ownership disputes about land location, and to permit the inclusion of satellite images that would allow allocation of reorganized land to take into account the presence of orchards/trees, topographic considerations, and cropping patterns. The development and implementation of a new computerized process for issuing land certificates that included geodetic coordinates and satellite images eventually opened the door for national adoption of this process.

29. Through major institutional changes, the Project managed to: (i) simplify the process and reduce costs for issuing certificate for land rights; (ii) decentralize titling to the regional level; (iii) approve and use of a single-page certificate format; and (iv) significantly shorten the time needed for the application and issuance of certificates. By the end of the Project it was possible to assign a unique parcel number to each certificate. The traditional certificates did not contain this information, and neither did Project certificates in the early years of the Project. However, by 2010 all certificates contained unique parcel numbers, and previous certificates were updated to also contain them. Through the acquisition of new satellite images that now include most of the flatland agricultural areas of the country and some of the mountainous areas, it is arguably the case that the GOT can make better informed investment decisions.

Table 14. Examples of Project Milestones for Streamlining Certificate Issuance System

October 2008	Local land committees must approve land allocations within 5 working days; final signatures and stamping of certificates must be completed in 5 working days; New Regional Land Committee Centers (RLCCs) system for issuing certificates approved
February 2009	Computerized production of certificates approved
May 2010	Unique parcel numbers now placed on each Project certificate. (Later, all previously approved certificates by Project also will receive unique parcel numbers.)
March 2011	State Committee on Land Management and Geodesy decides to use unique parcel numbers on certificates it issues beginning in May 2011
July 2011	Government approves new A4 simplified certificate. Project is already using the new format. The State Committee on Land Management and Geodesy will use the same form for certificates it issues beginning Sept. 30, 2011.
March 2012	PMU will help train State Committee on Land Management and Geodesy in assigning unique parcel numbers to each certificate.

30. The value of the new cadastral system is illustrated by the fact that it is now approved for use throughout Tajikistan, and will also be the technology used for

immovable property registration (buildings, household plots, etc.) in both urban and rural areas. SUERIP plans to utilize the Project’s GPS/GIS coordinate system, its orthophoto satellite image system, and its IT system for integrating this information onto property maps.

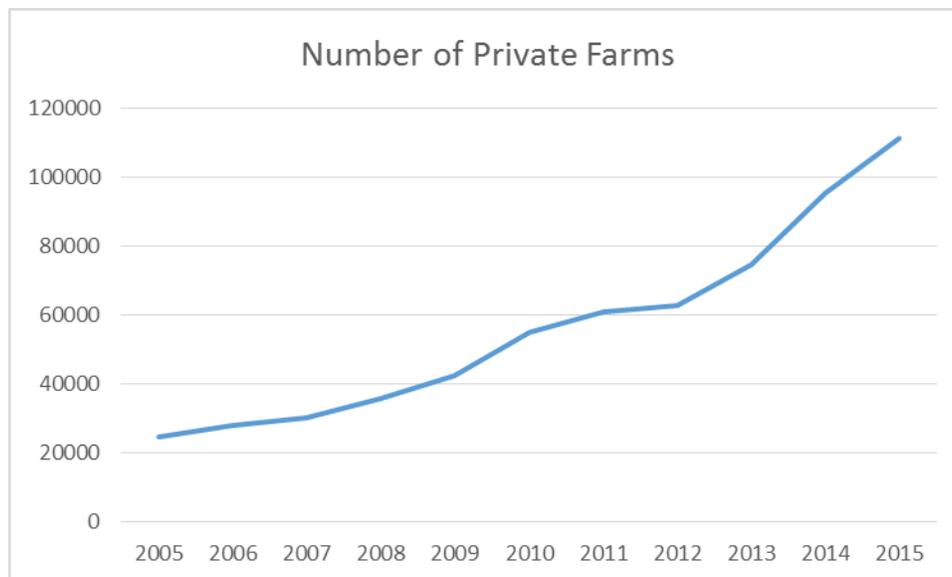
III. Structural Changes

31. Before presenting detailed results about structural changes in the economic set up that were propelled by the Project, it is important to note that the overall perception of a more secure land tenure has improved considerably between 2007 and 2015. Table 15 indicates what percentage of farmers support being able to buy or sell rights to land, although land use certificates are only inheritable and not otherwise transferrable. Results indicate a sharp increase in support of being able to buy and sell rights to land in the 2014-15 survey results. This may be due to recent national discussion about creating a unified system that would permit the buying or selling of rights to land, or it may be due to the fact that most of the respondents now have such certificates for land.

Table 15. Percent of Farmers Supporting the Ability to Buy or Sell Rights to Land.

	2007	2011	2014-15
Favor ability to buy or sell rights to land	33.5	28.3	67.9
Oppose ability to buy or sell rights to land	47.9	79.6	29.4
Don’t know	18.7	0	2.7

32. The Graph below depicts the soaring rhythm of farm privatization, arguably a result of changing perceptions of the public about the ability to buy/sell land and enhanced land security.



Source: SUERIP PIU

A. Freedom to Farm

33. One of the Project’s key performance indicators called for 50% or more of farmers to “strongly agree” that they make their own farming decisions. Survey results show that 44.6% of respondents now “strongly agree,” up from 29.1% in 2007. When “somewhat agree” and “strongly agree” are combined, 81.2% indicate they make most of the farming decisions themselves. The 2007 and 2011 studies noted that cotton farming lowland areas scored considerably lower on perceived “freedom to farm” by respondents. In part, this was due to the fact that until recently, local authorities continued to pressure farmers in various ways to plant at least 60-70% of their irrigated land with cotton. This was done to meet a national quota. Although there are still areas where local authorities exert pressures, important changes have occurred. Cotton decision-making questions are less positive, but still indicate that in about three-fourths of cases farmers believe they either somewhat or strongly agree they have the freedom to make their own decisions.

34. To assess this indicator, one main question was repeated across time. It asked respondents to agree or disagree with this statement: “In most respects, farmers in this region truly can use the land as they wish.” Four choices were offered: “don’t agree at all,” “don’t agree very much,” “agree somewhat,” and “strongly agree.” The indicator tracked the percentage that strongly agreed. As Table 16 shows, there was a sharp increase for this indicator between 2007 and 2011, and then an increase for 2014-15 in the “agree somewhat” category. If the agree somewhat and strongly agree categories are combined, more than 80% of farmers can be said to agree at least somewhat that they can now make their own farming decisions. For Individual Dehkan farmers, the percentage was 49.3% strongly agreeing, while for Family Dehkan farmers it was 36.7%.

Table 16. Freedom to Farm Attitudes of Respondents in 2007, 2011, and 2014-15. “In most respects, farmers in this region truly can use the land as they wish.”

	Don’t agree at all	Don’t agree very much	Agree somewhat	Strongly agree	Not sure
2007	10.3%	12.3%	41.9%	29.1%	6.4%
2011	7.8%	12.3%	24.1%	44.9%	10.95%
2014-15	2.1%	16.0%	36.6%	44.6%	.7%

35. Freedom to farm was also rated as the single most important reason for land restructuring, according to the Project beneficiaries. Respondents were asked a series of six questions about what would be the most important factors that would cause them to want to restructure their farms. The top-ranked item was “ability to farm independently,” with 53.4% of farmers saying this would be a “very important” reason for restructuring. Freedom to plan whatever they want was rated as “very important” by 42.2%. These responses provide support for the idea that freedom to farm is very important to farmers.

B. Cropping Patterns

36. At appraisal, more than three quarters of the national land use was under cotton and wheat production. The Project’s activity was expected to center around rain fed areas where the opportunities for crop substitution (wheat) are limited naturally. Furthermore,

the original analysis claimed that the Project would not target a fundamental change in the cotton financing arrangements which were considered as an essential mitigating control of cotton financiers over planting areas as to avoid antagonizing vested interests. That said, at Project closing, significant diversification of agricultural production has occurred, increasing from an average of 1.28 crops per farm in 2007 to 4.26 crops per farm by 2015. Vegetable crops and orchards have seen large increases in the percentages of farmers growing them. Almost 40% of Individual Dehkan farmers and 38% of Family Dehkan farmers “strongly agreed” they have made major changes in crops grown.

37. Although many factors influence changes in crop production, land restructuring has been one important factor in recent years in Tajikistan. Table 17 shows changes in the percentage of farmers planting certain crops over the three surveys. Notable increases in growing vegetable crops such as tomatoes, onions, carrots, potatoes and cabbage can be seen. The percentage growing cotton has fluctuated, perhaps due in part to changes in world prices, which confirms that freedom to farm has allowed rural households to respond to market forces. These changes in cropping patterns have positive impacts on food security and nutrition. From an economic standpoint, farmers have significantly increased the number of crops grown providing them with an enhanced safety net. The diversification of farmers’ crops is important in several ways. Higher variety in crops means less vulnerability to prices fluctuation in a single crop. Moreover, it illustrates the fact that farmers are now changing their crops or adding additional crops in order to meet market demand and trends, as well as to increase profitability.

38. In 2007, more than half of the farmers who planted cotton planted only cotton. By 2011, 22% of cotton producers grew only cotton, and by 2014-15 12% of cotton producers grew only cotton. Thus, although many are continuing to produce cotton, they are also diversifying into other crops. A similar trend holds true for wheat. In 2007, almost half of the farmers grew wheat, and half of those farmers grew only wheat. By 2011, the percentage of wheat farmers growing only wheat had declined to 26%, and by 2014-15 it was 14%. Many farmers also report that they are rotating crops to increase production and maintain soil fertility. There have been notable increases in planting of orchards and vineyards. Now, more than one-third of responding farmers said orchards are one of their crop areas, significantly higher from 8.8% in 2007.

Table 17. Trends in Crops Grown Across Three Time Periods: 2007, 2011, and 2014. Percentage of Farmers Saying They Grow Each Crop.

	2007	2011	2014-15
Cotton	24.7	37.8	29.7
Wheat	46.3	63.3	59.8
Potatoes	12.6	31.5	43.2
Onions	9.2	19.3	40.6
Carrots	5.0	13.6	28.1
Tomatoes	5.0	14.3	21.1
Corn	5.4	10.5	15.1
Cabbage	1.1	3.1	12.5
Orchards	8.8	12.7	35.6

Vineyards	4.2	2.4	12.1
Cucumber	1.9	5.9	11.0
Rice	2.9	4.2	6.1
Sunflower	1.7	3.3	3.6
Improved pasture	0	.6	16.6

39. As the Table below suggests, the most significant change in cropping patterns has been towards the cultivation of vegetables, a higher-value agricultural produce for export. In 2011, the earliest year for which data is available, Tajikistan produced 1,241.9 thousand tons of vegetables whilst in 2015 it produced 1,667 thousand tons – an increase of 34%. While the switch to vegetable crops may coincide with a regional trend over the past decade¹¹, the significance of the increasing vegetable production is particularly relevant to non-industrial agriculture (see Table below) – mainly areas and farmers supported by the Project.

Table 18: Sown area and gross harvest

	2011	2012	2013	2014	2015
Sown area (thsd.ha)	850.4	860.1	864.9	828.5	830.5
Winter crops	250.7	247.7	281.5	264.7	256.9
Cereal crops	250.7	247.7	281.5	264.7	256.9
Spring crops	599.7	612.4	583.4	563.8	573.6
Cereal crops	176.5	176.6	156.0	147.9	166.8
wheat	81.0	77.5	60.1	52.3	62.0
barley	51.0	51.5	50.4	50.9	54.7
Industrial crops	236.3	231.6	223.0	207.7	188.6
Potatoes	36.7	41.7	44.4	35.5	39.8
Vegetables	46.9	49.0	50.7	48.5	55.4
Melons	17.2	18.4	17.4	19.4	21.4
Gross harvest, thsd.tons					
Cereal crops	1098.2	1232.6	1392.7	1317.8	1392.8
Potatoes	863.1	991.0	1115.7	853.7	887.4
Vegetables	1241.9	1342.4	1490.6	1549.5	1667.9
Melons	423.3	465.0	495.3	545.7	592.4

Source: Statistical Agency under President of the Republic of Tajikistan

40. These changing patterns in crop production can arguably be linked to farmers' higher control over a broader spectrum of farming decisions. Table 18 shows that about three-quarters of the final evaluation's respondents state they either somewhat agree or strongly agree that they control a full range of decisions about conventional cropping.

¹¹ Food and Agriculture Organization (FAO) Statistical Yearbook 2014, Europe and Central Asia Food and Agriculture, p. 32, available at: <http://www.fao.org/3/a-i3621e.pdf>.

Table 18. Percentages of Farmers Who Believe They Can Make Their Own Farming Decisions about both Non-Cotton and Cotton Crops.

	Don't agree at all	Don't agree much	Agree Some what	Strongly Agree	Not Sure
Non-Cotton Crops	%	%	%	%	%
Farmers in this region can truly use the land as they wish	2.1	16.0	36.6	44.6	.7
Farmers are free to choose how much land to allocate to different crops	3.6	21.9	34.5	39.9	.1
A Farmers can market their products in any way they choose	3.6	15.3	43.4	37.3	.4
Farmers can buy seed, fertilizer, pesticides or other inputs from whomever they wish	4.6	16.9	36.7	40.8	1.1
Farmers can choose any financing source they wish for inputs or other needs	4.5	13.9	37.4	40.3	3.8
Cotton Crops					
Farmers are free to choose how much land to allocate to cotton	1.7	15.2	26.2	56.2	.7
Farmers are free to choose where to gin the cotton	2.3	29.8	43.3	24.5	.1
Farmers are free to buy seed, fertilizer, pesticides, or other inputs from anyone	4.2	25.0	40.3	30.2	.3
Farmers are free to choose their financing source	5.1	20.5	46.5	27.5	.4
Farmers are free to decide when to collect cotton stalks	3.3	25.6	38.5	32.2	.7

C. Restructuring and farmers' access to inputs and markets

41. Farmers were asked a series of questions about how restructuring and receiving a certificate had changed their access to inputs and markets. Along with finding markets for their products, focus groups had suggested that access to water, machinery and other inputs had been a problem. For this reason, farmers were asked to indicate whether their access to these resources had increased or decreased since receiving their certificates. Although it is difficult to determine precisely the degree to which access to inputs and markets are attributable to Project interventions, the results in Table 19 show that for many rural households perceived access to such agricultural inputs has increased. More than half of Individual Dehkan farmers indicated that access to tractors and machinery has increased.

Table 19. Perceived Access to Resources and Markets After Receiving Certificates for Both Individual and Family Dehkan Farmers.

	Great decrease	Some decrease	No change	Some increase	Great increase	Don't know
Individual Dehkan Farmers						
Access to water	10.7	13.6	36.0	30.0	8.9	.7
Ability to sell crops and livestock	7.4	21.4	32.0	23.0	15.8	.4
Access to tractors and equipment	5.3	13.7	24.0	32.0	24.2	.8
Family Dehkan Farmers						
Access to Water	.9	10.0	23.7	34.2	30.9	.2
Ability to sell crops and livestock	4.4	13.0	32.8	28.1	21.4	.2
Access to tractors and equipment	1.6	14.4	22.6	37.7	23.5	.2

42. In conclusion, the ex-ante analysis of the Project suggested that the Project was economically and financially feasible. The main benefits that were envisaged to occur at the Project's original appraisal were through increased value added of agricultural activities (crop production) through a broadly enabling access to land by the farm workers of the state and collective farming entities. Due to data availability limitations the original, or a similar, analysis could not be replicated. At the same time, there is ample evidence that the Project had substantive economic effects both in terms of output (agricultural output, household income, investment, and employment) as well as efficiency (reduction in costs and time for issuing land use certificates). The Project also provided significant impulse for positive structural changes (freedom to farm, diversification of crops, and access to inputs and markets).

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Supervision/ICR			
Alexander Balakov	Senior Procurement Specialist	GGODR	
Eustacius N. Betubiza	Consultant	GTCDR	
Norpulat Daniyarov	Sr Financial Management Specialist	GGODR	
Ivan Earl Ford	Consultant	ECSN	
Mika Torhonen	Sr Land Administration Specialist	FAO/ ECSN	
Victoria Stanley	Sr Rural Development Specialist	GSULN	
Nandita Jain	Consultant, M&E and gender	GSULN	
Malcolm Childress	Sr Land Administration Specialist	ECSN	
Daniel P. Gerber	Rural Development Specialist	GFADR	
Niso Bazidova	Financial Management Specialist	GGODR	
Dilshod Karimova	Procurement Analyst	GGODR	
Nodira Pirmanova	Administrative support	ECCTJ	
Aliya Kim	Financial Management Analyst	GGODR	
German Stanislavovich Kust	HQ Consultant ST	GENDR	
Evelin Lehis	Consultant	ECSSD	
Jonathan Mills Lindsay	Lead Counsel	LEGEN	
Jessica Mott	Sr Natural Resources Econ.	ECSN	
Shodi Nazarov	Financial Management Analyst	EC303	
John Otieno Ogallo	Sr Financial Management Specialist	OPSOR	
Tolobak Omouraliev	Consultant	ECSN	
Fasliddin Rakhimov	Procurement Specialist	GGODR	
Marc Peter Sadler	Adviser	GFADR	
Nigora Safarova	Consultant	ECSSD	
Thirumangalam V. Sampath	Sr Agriculturist	ECSSD	
Bekzod Shamsiev	Senior Agriculture Economist	GFADR	
Bobojon Yatimov	Senior Rural Development Specialist	GFADR	
Peter Zara	Junior Professional Associate	ECSSD	

(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		
FY05	28	158.34
Total:		158.34
Supervision/ICR		
FY05	4	20.64
FY06	21	105.52
FY07	23	114.83
FY08	15	103.9
FY09	32	144.11
FY10	26	140.52
FY11	25	151.60
FY12	17	104.51
FY13	15	130.80
FY14	11	117.93
FY15	15	111.56
FY16	8	67.82
Total:		1313.75

Annex 5. Beneficiary Survey Results

Several beneficiary surveys were conducted in partnership with other donors (USAID) and a workshop was held in June 2015 to present the Project to Civil Society Organizations (CSO) and obtain feedback and suggestions from civil society on how to improve the Project. Participating organizations included government counterparts (LRCSP PMU, SUERIP, State Land Committee), CSOs (Consumer Union, Associations of Apartment Owners, Research and Scientific Center, Human Rights Bureau, National Association of Farmers, Helvetas), and international organizations (World Bank, USAID).

Executive summary from the final beneficiary survey by Eric Abbott (March 2015) and main result below.

1. This evaluation of the Land Registration and Cadastre Project for Sustainable Agriculture (LRCSP) in Tajikistan concludes that the Project has met both its original and revised PDO. The original PDO was to: expand farm privatization activities under the first Farm Privatization Support Project by providing private individuals or groups of farmers with secure land use right certificates and with essential complementary services. The revised PDO was to: (i) expand farmland restructuring, (ii) increase the number of immovable properties with secure tenure rights, and (iii) propose a plan for the improvement of the immovable property registration system. This Project created a workable technological system for land and immovable property registration that included a modern and transparent GPS/GIS coordinates system, satellite maps, and unique parcel numbers for each property. The system has been approved nationally for use, and its simplified one-page certificate is now the standard for land registration in Tajikistan. Using this new system, more than 112,000 certificates have been issued to new Individual and Family Dehkan farmers, with benefits extended to more than 321,000 shareholders, almost half of whom are women. PDO measurements indicate significant changes over time among farmers, with the great majority of them now having basic knowledge of their rights, and confidence that they make their own decisions. An examination of Project impacts found that more than 75% indicate their farm incomes have increased as a result of farm restructuring. The Project also successfully completed Environmental Land Management training activities, and established and assisted 73 Water User Associations. Building upon the land registration system, the Project has established pilot sites in order to extend the registration system to immovable property (buildings, household plots, etc.).

2. **Survey Results on Issuance of Certificates** Responses from the 1,600 farmers surveyed in 2014-15 as part of the evaluation confirmed that the Project was able to dramatically reduce the time needed to apply, process and receive a certificate. A combination of factors, including assisting farmers in applying for certificates, handling application materials so farmers did not have to visit many different offices, creating a computerized system that could include GPS coordinates, orthophotos, and a unique parcel number; gaining approval for certificates to be issued at regional offices in most cases rather than taking them to Dushanbe, and creation of a new simplified A4 certificate form, all contributed to reducing the time needed.

3. Survey results show that farmers receiving Individual Dehkan farm certificates from the Project waited only 30 days to get their certificates, compared to 157 days using the old process. Only three Project respondents of 771 said it took longer than 60 days. Project funds paid for the cost of processing and issuing certificates, so farmers paid only transportation costs needed to get documents to the office. All respondents, whether Project or not, said that getting a certificate through the Project was easier than getting one through the traditional procedure. In qualitative comments, farmers emphasized that Project certificates were free, were issued quickly, and did not require multiple trips to many separate offices. One also said that an advantage was that one didn't have to make any special payments to officials.

4. **Environmental Land Management.** The process of land restructuring has created 10 times more farms and farmers than was the case before. This makes the process of protecting farmland and watersheds more complex. Survey results show that soil fertility and soil erosion are both listed in the top-10 of problems farmers are now facing. Most farm managers in focus groups say that they learn mostly from farmers around them. With new dehkan farms and farmers, there is considerable experimentation occurring, and this can lead to improved practices and ideas for sustainable agriculture. However, farmers with little experience also are those most in need of training about the importance of crop rotation and soil protection. The Project pioneered a method of calling attention to "best environmental practices" by having raion-level competitions to select the farmers who are doing the best job of sustainable agriculture. The winners received a small cash prize, but also agreed to make their farms the site for future raion environmental training.

5. **Survey results on water management.** Three different focus groups were conducted with LRCSP Water Users Association members and leaders. All were held in lowland areas where allocation of irrigation water is critical to agricultural production. There was agreement that an organization such as a Water User Association (WUA) is needed to act between the water authority and farmers. With all the new farms, officials felt there were too many farmers for the water authority to deal with each one directly to determine needs and costs. Instead, the WUA takes on this function. Several participants said that without WUAs, some areas would not be getting any water. But farmers sometimes see WUAs as just another agency taking their money, like taxes and fees. Farmers said they are billed for water they really don't receive, or they are billed for 10,000 cubic feet of water when there is no way to actually measure how much they received (they perceive they receive less, such as 6,000 cubic feet). They also complained about the condition of canals, and about shortages of water or timing that prevents them from planting vegetable crops that would increase their income instead of cotton. A number of participants said they wanted to change the crops they grow in order to increase income. However, they said they cannot do this either because the water does not arrive when the new crops would need it, or because the "plan" specifies that they can only receive the amount of water that they got for the traditional crops grown on that land.

Annex 6. Stakeholder Workshop Report and Results

Two stakeholder workshops were held.

1. Presentation of the results of the beneficiary survey on March 17, 2015. Presented by Eric Abbott, International Consultant and Lead Author of the Final Project Evaluation - Impact of Land Restructuring on Farmers in Tajikistan. Participants included central and local government staff involved in the Project and farm restructuring, relevant NGOs, other donors.
2. Closing workshop held on March 3, 2016 featured presentations from the Bank team, SLCMG, the LRCSP PMU, National Association of Dehkan Farms and others involved in the Project.

Annex 7. Summary of Borrower's ICR

Summary of the Borrower's Project Completion Report

1. Because the agricultural sector is the largest employer in the Republic of Tajikistan, it was important for the Government of Tajikistan (GOT) to implement policies and build the capacity to improve agricultural development. One method of improving the agricultural sector was through land reform and the move away from an inefficient, Soviet-era system to a streamlined legislative framework that restructured farmlands, established a cadastral system and improved the ease of registering rights to immovable property. The implementation of these reforms included the Bank-financed Land Registration and Cadastre System for Sustainable Agriculture Project (LRCSP).

2. The GOT and the World Bank signed a Grant Agreement on June 20, 2005 that disbursed US\$10.269 million in order to implement the LRCSP. The Project's objectives included: i) the restructuring of agricultural enterprises and the establishment of the family and individual dehkan farms as their basis; ii) introduction of the satellite coordinate system (GPS) in Tajikistan, which permitted geodetic, land surveying, and cartographical works, as well as work on registration through the use of electronic technologies; iii) awareness-raising activities among the rural population on issues of land use rights and procedures for the establishment of family and individual dehkan farms; iv) support for on-farm irrigation networks restoration and assisting the establishment of Water Users Associations (WUAs); and v) use of environmental agricultural lands. Initially, the LRCSP was implemented in 38 pilot raions throughout Tajikistan but was later expanded to 50 raions with the help of seven Regional Land Cadastral Centers (RLCCs).

3. Based on a Knowledge Test that included 1,600 participants, the Project Development Outcome (PDO) indicators largely achieved their goals, although the impact of the project was felt in some regions more than others. Generally, most participants either somewhat or strongly agreed that farmers could use their land in whatever manner they chose, including informal leasing and growing whatever crops they wanted. Additionally, over 70 percent of participants understood that women could manage farms and that farmers must pay all taxes on their land. Furthermore, income played a major factor in incentivizing farmers to restructure their farms from the collective method to an individual or family dehkan farm. In particular, owners of both family and individual dehkan farms agreed either somewhat or strongly that having a land certificate increased their household's farming income.

4. In order for successful project implementation, it was crucial for the GOT to implement a series of reform-oriented policies that would help to accelerate farmland restructuring and reform agricultural enterprises as well as increase the productivity in issuing land use rights certificates. The effectiveness of these policies relied upon both the GOT and local authorities working in tandem. This was largely successful and was instrumental in the success of the LRCSP.

5. Additional components of the LRCSP included the creation of a new geodetic coordinate system and the use of high resolution satellite images in order to produce 9,099 orthophoto maps of farmland throughout Tajikistan. Furthermore, acquiring a land use rights certificate was simplified in order to incentivize farmers to register land by cutting costs, the number of steps, and the amount of time needed to complete registration.

6. Environmental safeguards were an important factor in the work to improve the national capacity in the field of environmental land management. An evaluation of the environmental problems in Tajikistan's agricultural sector revealed significant deterioration in the agro-ecosystem pollution trends, particularly in regards to soil erosion and irrigation methods that exhausted water resources for crops. Methods of resolving this issue included the use of demonstration plots that combined high economic results with successful environmentally-friendly technologies and trainings and workshops to improve the capacity of local specialists in agriculture, environmental protection, and land management.

7. The LRCSP was managed by the Project Implementation Unit (PIU), which directed the activities of the seven RLCCs and one Urban Center on Immovable Property Registration, which had been established additionally, as well as the staffing supplying of the three Rayon Centers on Immovable Property Registration, Project implementation progress, preparation and execution of the budgets' plans, procurement, monitoring and evaluation; the ensuring of the communication to PIU with the World Bank, Government of the Republic of Tajikistan, State Committee on Land Management and Geodesy of the Republic of Tajikistan and other public bodies, with the mass media, as well as with relevant international organizations and donors.

8. Finally, the World Bank's role in Project implementation and completion included restructurings in order to make changes in the PDO achievement measurement when needed, procurement methods, and extending the closing date of the project in order to provide a better timeframe of the completion of development objectives. The World Bank worked in tandem with the GOT, providing assistance in project implementation while simultaneously promoting and assisting in the implementation of governmental decrees that contributed to land and farm restructurings.

Annex 8. List of Supporting Documents

Country Partnership Strategy Progress Report for The Republic Of Tajikistan for the period FY 06-09 and FY 10-13

World Bank. (March 15, 2005). Tajikistan – Land Registration and Cadastre System for Sustainable Agriculture Project. Project Appraisal Document, Report No. 30512-TJ. Environmentally and Socially Sustainable Development Sector Unit. Europe and Central Asia Region.

World Bank. (March 21, 2007). Tajikistan: Land Policy Note.

World Bank and U.S. Agency for International Development. (August, 2007). Farmland restructuring: A baseline survey and qualitative analysis of knowledge, attitudes and practices of 1500 farmers in 15 Tajikistan raions concerning land use rights and farm restructuring. World Bank Tajikistan Land Registration and Cadastre Project and the U.S. Agency for International Development Tajikistan Land Reform and Market Development Project.

World Bank. (January 24, 2012). Project paper on a proposed additional grant in the amount of SDR 6.6 million (US \$10 million equivalent) to Republic of Tajikistan for a land registration and cadaster system for sustainable agriculture project. Report No: 66367-TJ. Sustainable Development Department, Central Asia Country Unit, Europe and Central Asia Region.

World Bank, DFID and USAID. (June 21, 2012). Tajikistan: Farmer and Farm Worker Perceptions of Land Reform and Sustainable Agriculture in Tajikistan. Environment/Natural Resource Management, Europe and Central Asia. Report No. AAA81-TJ.

Rushdi Dehot. (March 26, 2013). Civil society monitoring of the Land Registration and Cadastre Project in Tajikistan. Contract No. 7164529.

World Bank. (August 2013). Autonomous climate change adaptation: economic opportunities and institutional constraints for farming households. Poverty Reduction and Economic Management Unit, Europe and Central Asia Region.

