

Document of
The World Bank

Report No: ICR2093

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-39280 IDA-H0970 TF-53572)

ON A

CREDIT
IN THE AMOUNT OF SDR 3.4 MILLION
(US\$ 5.0 MILLION EQUIVALENT)

AN
IDA GRANT
IN THE AMOUNT OF SDR 3.9 MILLION
(US\$5.8 MILLION EQUIVALENT)

AND A
GLOBAL ENVIRONMENT FACILITY GRANT
IN THE AMOUNT OF US\$ 4.5 MILLION

TO THE

REPUBLIC OF TAJIKISTAN

FOR A

COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

December 10, 2012

Sustainable Development Sector Department
Central Asia Country Department
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 17, 2012)

Currency Unit = Somoni

TJS 1.00 = US\$ 0.210

US\$ 1.00 = TJS 4.764

FISCAL YEAR

[January 1 – December 31]

ABBREVIATIONS AND ACRONYMS

ACTED	Agency of Technical Cooperation and Development Aid (French)	IFAD	International Fund for Food and Agriculture
AKF	Agha Khan Foundation	JDC	Jamoat Development Committee
CAS	Country Assistance Strategy	JRC	Jamoat Resource Centers Committee
CAP	Community Action Plan	IDA	International Development Association
CAWMP	Community Agriculture and Watershed Management Project	MSDSP	Mountain Societies Development Support Program
CBO	Community Based Organization	NBFO	Non Bank Financial Organization
CGIAR	Consultative Group on International Agricultural Research	NSIFT	National Social Investment Fund of Tajikistan
CIDA	Canadian International Development Agency	SIDA	Swedish International Development Agency
CIG	Common Interest Group	PMP	Pest Management Plan
CPS	Country Partnership Strategy	PMU	Project Management Unit
DFA	Development Financing Agreement	PPAP	Pilot Poverty Alleviation Project
EA	Environmental Assessment	PRSP	Poverty Reduction Support Program
EMF	Environmental Management Framework	RIRP	Rural Infrastructure and Rehabilitation Project
FAO	Food and Agriculture Organization	SCNP	State Committee for Nature Protection
FO	Facilitating Organization	PCU	Project Coordination Unit
FPSP	Farm Privatization Support Project	SLSC	State Level Steering Committee
GAA	German Agro Action	SPAP	Second Poverty Alleviation Project
GDP	Gross Domestic Product	TAAS	Tajik Academy of Agricultural Sciences
GEF	Global Environment Facility	UNDP	United Nations Development Program
MCI	Mercy Corps International	WDA	Watershed Development Committee
MOA	Ministry of Agriculture	WUA	Water User Association
ICARDA	International Center for Agricultural Research in the Dry Areas	MAWRM	Ministry of Amelioration and Water Resources Management
LG	Local Government (Oblast, Raion or Jamoat level)	RRDP	Rural Reconstruction and Development Program

Vice President:	Philippe H. Le Houerou
Country Director:	Saroj Kumar Jha
Sector Manager:	Kulsum Ahmed
Project Team Leader:	Bobojon Yatimov
ICR Team Leader:	Craig Meisner

TAJIKISTAN
Community Agriculture and Watershed Management Project

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DATA SHEET

A. Basic Information			
Country:	Tajikistan	Project Name:	Community Agriculture & Watershed Management Project
Project ID:	P077454, P081159	L/C/TF Number(s):	IDA-39280, IDA-H0970, TF-53572
ICR Date:	12/05/2012	ICR Type:	Core ICR
Lending Instrument:	SIL, SIL	Borrower:	REPUBLIC OF TAJIKSTAN
Original Total Commitment:	XDR 7.30M,USD 4.50M	Disbursed Amount:	XDR 7.30M,USD 4.50M
Environmental Category: F/F		Focal Area: B	
Implementing Agencies: Community Agriculture and Watershed Management Project Management Unit			
Co-financiers and Other External Partners:			

B. Key Dates				
Community Agriculture & Watershed Management Project - P077454				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	10/15/2002	Effectiveness:	11/25/2004	11/25/2004
Appraisal:	02/12/2004	Restructuring(s):	11/25/2004	11/25/2004
			05/25/2005	05/25/2005
			10/09/2008	10/09/2008
			04/27/2011	04/27/2011
Approval:	06/15/2004	Mid-term Review:	05/12/2008	05/12/2008
		Closing:	04/30/2011	04/30/2012

Community Agriculture & Watershed Management GEF Project - P081159				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	10/15/2002	Effectiveness:	11/30/2004	11/25/2004
Appraisal:	02/12/2004	Restructuring(s):	11/25/2004	11/25/2004
			10/08/2008	10/08/2008
			04/27/2011	04/27/2011
Approval:	06/15/2004	Mid-term Review:	05/12/2008	05/12/2008
		Closing:	04/30/2011	04/30/2011

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

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

C.3 Quality at Entry and Implementation Performance Indicators			
Community Agriculture & Watershed Management Project - P077454			
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):	No	Quality of Supervision (QSA)	None
DO rating before Closing/Inactive status	Satisfactory		

Community Agriculture & Watershed Management GEF Project - P081159			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating:
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA)	None
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA)	None
GEO rating before Closing/Inactive Status	Satisfactory		

D. Sector and Theme Codes		
Community Agriculture & Watershed Management Project - P077454		
	Original	Actual
Sector Code (as % of total Bank financing)		
Agricultural extension and research	10	10
General agriculture, fishing and forestry sector	49	49
Roads and highways	8	8
Sub-national government administration	25	25
Water supply	8	8
Theme Code (as % of total Bank financing)		
Biodiversity	24	24
Land administration and management	25	25
Other rural development	25	25
Participation and civic engagement	13	13
Rural services and infrastructure	13	13
Community Agriculture & Watershed Management GEF Project - P081159		
	Original	Actual
Sector Code (as % of total Bank financing)		
Animal production	25	25
Crops	30	30
Forestry	20	20
Irrigation and drainage	25	25
Theme Code (as % of total Bank financing)		
Land administration and management	40	40
Other social development	20	20
Rural non-farm income generation	20	20
Water resource management	20	20

E. Bank Staff		
Community Agriculture & Watershed Management Project - P077454		
Positions	At ICR	At Approval
Vice President:	Philippe H. Le Houerou	Shigeo Katsu
Country Director:	Saroj Kumar Jha	Dennis N. de Tray
Sector Manager:	Kulsum Ahmed	Marjory-Anne Bromhead
Project Team Leader:	Bobojon Yatimov	Thirumangalam V. Sampath
ICR Team Leader:	Craig M. Meisner	
ICR Primary Author:	Craig M. Meisner	

Community Agriculture & Watershed Management GEF Project - P081159		
Positions	At ICR	At Approval
Vice President:	Philippe H. Le Houerou	Shigeo Katsu
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F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

The project objective was to build the productive assets of rural communities in selected mountain watersheds, in ways that sustainably increase productivity and curtail degradation of fragile lands and ecosystems.

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

The PDO was not revised.

Global Environment Objectives (from Project Appraisal Document)

The global environmental objective was to entail protection of globally significant mountain ecosystems by mainstreaming sustainable land use and biodiversity conservation considerations within agricultural and associated rural investment decisions. This integrated management approach was also to provide replicable models for comparable areas throughout the country. The GEF objective was mainstreamed into the overall development objective and outcomes.

Revised Global Environment Objectives (as approved by original approving authority)

The GEO was not revised.

(a) PDO Indicator(s) (at appraisal)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	% of rural production investments are successful according to agreed economic, financial, social, and environmental standards and are being sustained.			
Value (quantitative or Qualitative)	Not applicable	80% of investments successful		85%
Date achieved	06/15/2004	04/30/2011		04/30/2012
Comments (incl. % achievement)	100% achieved. Takes into account financial, social, and environmental parameters and weighted by value of investment.			
Indicator 2 :	# Households participating in some part of the rural production component.			
Value (quantitative or Qualitative)	0	32,000 households		43,513
Date achieved	06/15/2004	04/30/2011		04/30/2012
Comments (incl. % achievement)	100% achieved. Double counting makes exact measurement difficult - this counts farm productivity and land resource management only and excludes rural infrastructure subprojects in order to avoid double counting.			
Indicator 3 :	% population is above poverty level in villages that are participating in Project.			
Value (quantitative or Qualitative)	About 3% of the population above poverty level	About 30% of the households above poverty level		50%
Date achieved	06/15/2004	04/30/2011		04/30/2012
Comments (incl. % achievement)	100% achieved.			
Indicator 4 :	Negative trends of land and mountain ecosystem degradation halted in Project area Jamoats.			
Value (quantitative or Qualitative)	YR1: Past 10-year trends analyzed	Restoration evident	78,000 ha	96,600 ha
Date achieved	06/15/2004	04/30/2011	04/30/2011	04/30/2012
Comments (incl. % achievement)	Indicator revised to "Area in ha covered by land resource management subprojects and other project activities that directly and successfully address land and ecosystem degradation." Also a GEO indicator. See section 1.4 for further explanation.			

(b) GEO Indicator(s) (at appraisal)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Negative trends of land and mountain ecosystem degradation halted in project area Jamoats.			
Value (quantitative or Qualitative)	YR1: Past 10-year trends analyzed	Restoration evident	78,000 ha	96,600 ha
Date achieved	06/15/2004	04/30/2011	04/30/2011	04/30/2012
Comments (incl. % achievement)	Indicator revised to "Area in ha covered by land resource management subprojects and other project activities that directly and successfully address land and ecosystem degradation." See section 1.4 for further explanation.			
Indicator 2 :	Area in ha covered by land resource management subprojects and benefiting very poor at least in proportion to their numbers in a community.			
Value (quantitative or Qualitative)	0	78,000 ha	US\$5.39 million	US\$6.20 million
Date achieved	06/15/2004	04/30/2011	04/30/2011	04/30/2012
Comments (incl. % achievement)	100% achieved. Revised to "Total value in \$US of land resource management subprojects designed and funded." To avoid overlap with revised outcome indicator #4 above. See section 1.4 for further explanation.			

(c) Intermediate Outcome Indicator(s) (at appraisal)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Total value of farm production investments where Project is operational.			
Value (quantitative or Qualitative)	0	US\$ 3.8 million		US\$ 3.85 million
Date achieved	06/15/2004	04/30/2011		04/30/2012
Comments (incl. % achievement)	100% achieved. Funds in JRC/JDC accounts, beneficiary contribution, revolving funds, and personal reinvestments.			
Indicator 2 :	Area in ha covered by land resource management subprojects and benefitting very poor at least in proportion to their numbers in a community.			
Value (quantitative or Qualitative)	Not applicable	78,000 ha	US\$5.39 million	US\$6.2 million

Date achieved	06/15/2004	04/30/2011	04/30/2011	04/30/2012
Comments (incl. % achievement)	100% achieved. Indicator revised to "Total value in \$US of land resource management subprojects designed and funded." Also a GEO indicator. See Section 1.4 for further discussion.			
Indicator 3 :	Number of improved public facilities, disaggregated by type of investment (village drinking water, roads and electricity).			
Value (quantitative or Qualitative)	Not applicable	Target not established but will be monitored.		577
Date achieved	06/15/2004	04/30/2011		04/30/2012
Comments (incl. % achievement)	100% achieved - based on 577 total including facilities held by private beneficiary groups. 170 drinking water, 131 small irrigation and drainage rehab, 227 access road rehab, 32 micro energy gen. and transmission, and 17 other.			
Indicator 4 :	% of Project-financed farm production and land management investments applying improved technologies, and receiving good access to necessary inputs and knowledge.			
Value (quantitative or Qualitative)	Not applicable	40%	8,000	9,175
Date achieved	06/15/2004	04/30/2011	04/30/2011	04/30/2012
Comments (incl. % achievement)	Indicator revised to "Cumulative number of rural people who have received technical training from TAAS, FOs, or other Project partners." See section 1.4 for further explanation.			
Indicator 5 :	Number of indigenous crop varieties from Project area preserved as live specimens.			
Value (quantitative or Qualitative)	Not applicable.	Target not established.		300
Date achieved	06/15/2004	04/30/2011		04/30/2012
Comments (incl. % achievement)	100% achieved. See Section 1.4 for further explanation.			
Indicator 6 :	Number of JDCs that are overseeing implementation of rural production subprojects.			
Value (quantitative or Qualitative)	Not applicable	47	39	39
Date achieved	06/15/2004	04/30/2011	04/30/2011	04/30/2012
Comments (incl. % achievement)	100% achieved. Indicator revised to 39 Jamoats due to budget constraints - see Section 1.4 for further discussion.			
Indicator 7 :	Bank supervision ratings and reputation for integrity as perceived in public opinion surveys.			
Value (quantitative or Qualitative)	Not applicable.	Satisfactory	On schedule	On schedule

Date achieved	06/15/2004	04/30/2011	04/30/2011	04/30/2012
Comments (incl. % achievement)	Indicator revised to "Project management ensures Project implementation timeliness". See Section 1.4 for further discussion.			

G. Ratings of Project Performance in ISRs

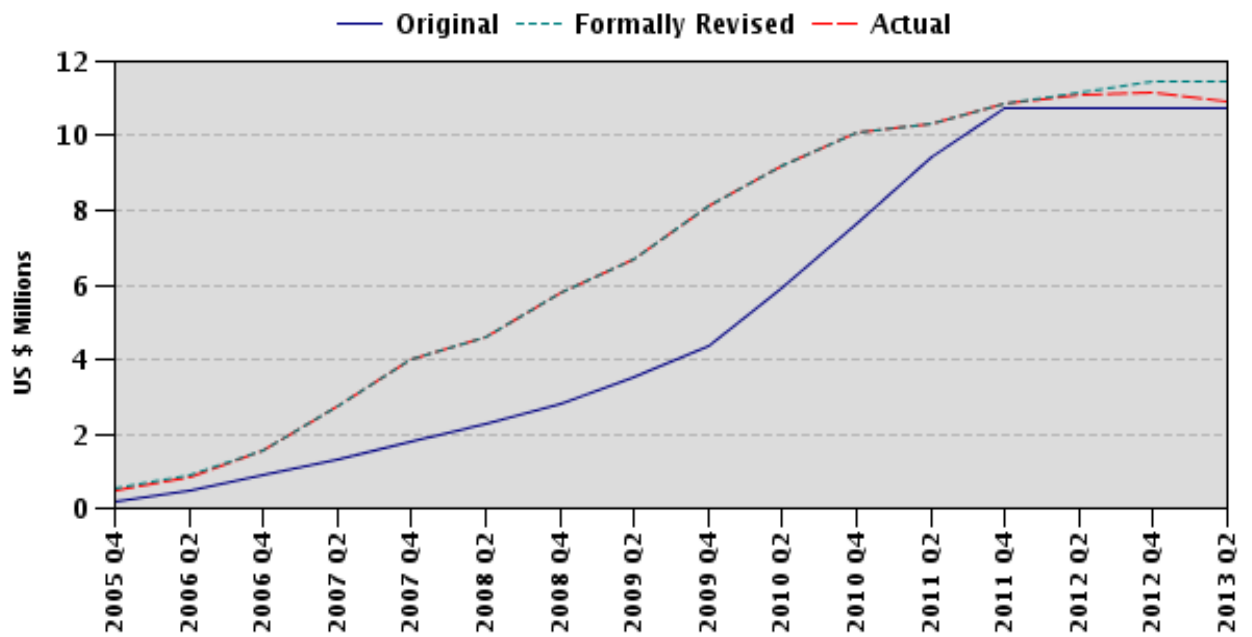
No.	Date ISR Archived	DO	GEO	IP	Actual Disbursements (USD millions)	
					Project 1	Project 2
1	06/29/2004	S	S	S	0.00	0.00
2	12/21/2004	S	S	S	0.00	0.00
3	05/24/2005	S	S	S	0.50	0.20
4	10/14/2005	S	S	S	0.85	0.20
5	12/12/2005	S	S	S	0.85	0.20
6	04/25/2006	S	S	MS	1.53	0.34
7	05/08/2006	S	S	MS	1.53	0.34
8	08/23/2006	S	S	MS	1.90	0.36
9	11/21/2006	S	S	MS	2.22	0.42
10	04/06/2007	MS	MS	MS	3.47	0.54
11	06/20/2007	MS	MS	MS	3.96	0.68
12	10/10/2007	MS	MS	MS	4.31	1.01
13	06/13/2008	S	S	S	5.62	1.60
14	10/14/2008	S	S	S	6.40	2.15
15	06/03/2009	S	S	S	7.70	3.28
16	11/21/2009	S	S	S	9.10	4.50
17	05/22/2010	S	S	MS	9.70	4.50
18	11/07/2010	S	S	S	10.29	4.50
19	05/31/2011	S	S	S	10.70	4.50
20	11/12/2011	S	S	S	11.05	4.50
21	03/25/2012	S	S	S	11.05	4.50

H. Restructuring (if any)

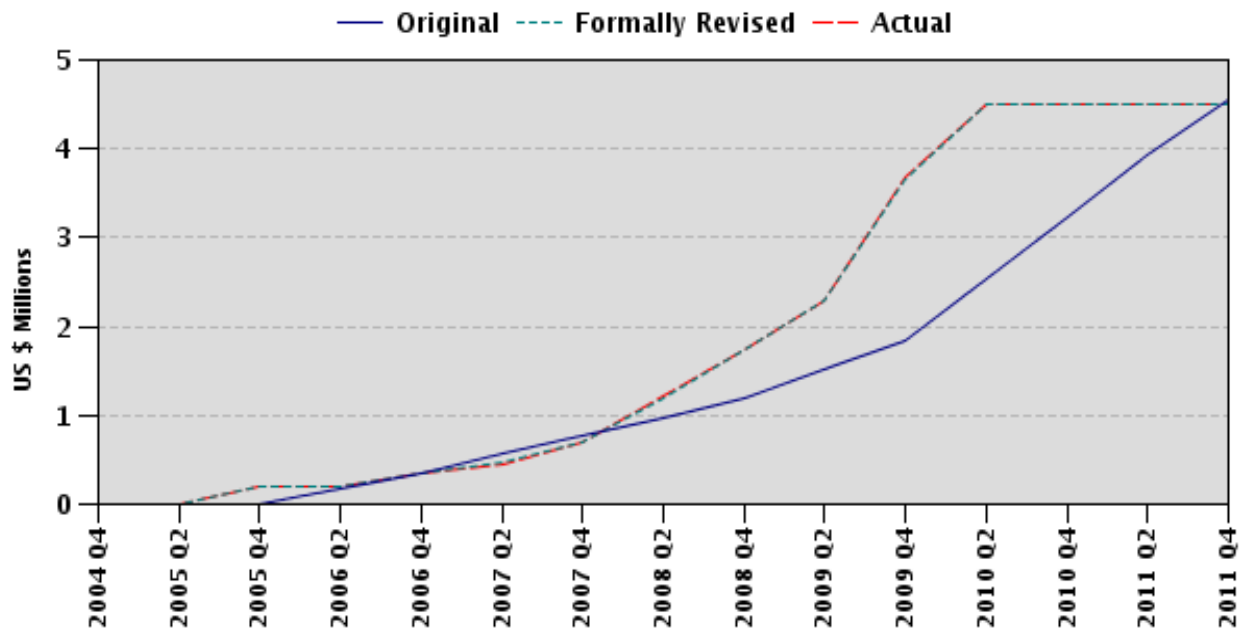
Restructuring Date(s)	Board Approved PFO or GEO Change	ISR Ratings at Restructuring			Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		PDO	GEO	IP		
11/25/2004	N	S	S	S	0.00	Amendments to the IDA Development Financing Agreement and GEF GA – changes made to percentages in expense categories; percentage of expenditures to finance Consultant services and Research and Demonstration grants changed.
05/25/2005	N	S	S	S	1.05	Amendment to DFA- expenditure percentage change for incremental operating costs and new paragraph added for QBS of Consultants.
10/09/2008	N	S	S	S	10.98	Amendments to the DFA and GEF GA - changes made to percentages in expense categories (DFA) and reallocation of funds across expense categories (DFA and GEF GA).
04/27/2011	N	S	S	S	14.79	a) Project extension from April 30, 2011 to April 30, 2012 for the IDA credit only; (b) consolidation of disbursement categories and percentages to simplify final project administration; (c) reference to mass media services provided by the government-owned enterprise as an incremental operating cost; (d) addition of sole source selection (SSS) as a procurement method for consultants; (e) minor revisions of the Results Framework; and (f) other revisions to ensure that past legal amendments and current updates of the cost estimates are accurately and consistently reflected in the official financing and cost data.

I. Disbursement Profile

P077454



P081159



1. Project Context, Development and Global Environment Objectives and Design

1.1 Context at Appraisal

GDP growth, poverty, and agriculture. Tajikistan has an area of some 141,000 km² of which some two-thirds form the foothills and high mountains of the Pamirs. Several regional ethnicities are represented among its population of 6.3 million. Independence, turmoil and civil war left it among the poorest countries in the world, but the economy was developing. As of 2000 annual per capita income was only around US\$180, and some 83% of the population was poor, but during 2000-2003, real GDP growth ranged from 6.0% to 10.2% per year. Tajikistan is an agrarian society and agriculture is critical to poverty reduction and economic growth. Some two-thirds of the population was directly dependent for their living on Tajikistan's 4.6 m ha of agriculture land, of which only about 850,000 ha were arable lands, and the remaining 3.86 m ha were pasture, fallow lands and meadows.

Highland areas and land degradation. About twenty percent of the population lived in hilly and mountain areas where access to most government services was limited. Most of the 2.5 m ha agricultural land they farm was pasture, only 206,000 ha were in perennial crops and orchards, and there were few significant irrigation systems. Rural poverty, shifts in land management responsibilities, lack of integrated land management, inappropriate agriculture, and poor access to technical support were causing increasing land degradation. Much of the population was using steep hillsides to grow cereal crops. In turn, land degradation contributed to further impoverishment through mudslides (ruining villages, roads and farmland, and irrigation and water systems), soil-erosion (undermining agricultural productivity) and silting of waterways used for drinking water and irrigation. However, highlands had good productive potential if appropriately farmed. In addition to improving life for people in the highlands, utilizing this potential in sustainable ways would also prevent downstream damage and relieve pressure on the lowlands.

Mountain ecosystems. Tajikistan had globally important mountain ecosystems with diverse flora and fauna, including many of economic importance, and under threat. Pastures, for example, hosted over 3,000 plant species, but faced threats from localized over-grazing. The wild-growing fruit plants of Tajikistan represented a unique genetic resource for agriculture. The mountain territories of southern and south-eastern Tajikistan were the major regions for conservation of wild-growing fruits (apples, pears, apricots, mulberries, cherry plums and plums, among others), nuts (walnuts and almonds), grapes and berries (currants, sea-buckthorn berries). Country's forest areas, which covered only 3% of the territory, decreased by about 15% between 1990 and 2000 due to the need for firewood.

Farm privatization. Officially, some 55% of all arable land had been converted into lease farms, joint stock companies and family farms. However, in lowland cotton growing areas, farmers were still not free to make their own management decisions, while in highlands they lacked the capital needed to exploit productive potential. Furthermore, there were also large tracts of pasture, formerly under the control of state farms, which were under the control of Jamoats.¹ These pastures faced problems of inadequate maintenance as well as arbitrary and inequitable access to grazing rights and land use. For details, see Annex 1 of Project Appraisal Document (PAD).

¹ The Jamoat (sub-district) is lowest official government unit, and usually comprises a number of villages.

Government strategy. The key elements of Tajikistan's Poverty Reduction Strategy Program (PRSP) emphasized accelerated growth, provision of basic social services, and targeted support for the poor and improved governance. The governance initiatives included more local planning and management, especially at the Jamoat level. For the agriculture sector, the Government's strategy supported the efficient use of, and access of the poor to land, water, financial and other resources, and eliminating government intervention in private farm decision making. The PRSP also highlighted the regional dimension to poverty, with the highlands facing special difficulties, especially in the south-east. For the environment, the PRSP emphasized addressing natural disasters, water pollution, soil degradation, deforestation and biodiversity conservation. Specific measures related to afforestation, pasture improvements and protection, development of the institutional frameworks, and mainstreaming of sustainable land management and biodiversity conservation in agriculture and forestry were considered government priorities as documented in the National Strategy for Combating Desertification (2002), and the National Biodiversity Conservation Action Plan (2003). Tajikistan was an active party to the United Nations Conventions: (a) to Combat Desertification (1997); (b) on Biodiversity Conservation (1997); and (c) on Climate Change (1998).

Government actions. The Government was trying to delegate more authority to Jamoats within a broader government decentralization strategy and also attempting to implement its agriculture strategy through programs of farm privatization, irrigation and other rural infrastructure, improved technical support services, and improved access to rural finance. However, there remained problems of past reliance on, and vested interests in, top-down control, and lack of accountability. Furthermore, severe fiscal constraints and a lack of familiarity with incentive frameworks (which could address shortcomings of regulatory approaches where enforcement capacity was inadequate) limited the extent of overall program impacts. For details, see Annex 1 of the PAD. Bank projects were directly supporting the implementation of the Government's programs focused on agriculture, with particular attention to developing new, replicable approaches that address the key implementation and sustainability constraints. Based on this experience, the Government requested the Bank to extend its support to highland areas.

Rationale for Bank assistance

Bank experience and potential for scaling up. Bank support would build upon the experience, analysis and relationships already established under its project and sector work, and under programs of other donors. The Bank had extensive operational experience in local demand-driven approaches to agricultural development. Past Bank support had also demonstrated the use of field-level pilot experience to constructively influence crucial policy and legislation. Bank-financed projects within Tajikistan had already established culturally-appropriate, community-managed models for: (a) allocation of land use rights in ways which ensure transparency, with participation of the community in the allocation of parcels, legitimacy (through involvement of traditional local institutions), conflict management, and land tenure security; (b) management of investments in irrigation infrastructure and their subsequent operation through Water User's Associations; (c) establishment of efficient technology transfer mechanisms through Farmer Information and Advisory Services; and (d) establishment of a credit mechanism for seasonal agricultural needs through revolving funds via Non-Banking Financing Organizations. In addition, the Bank was applying best practices and lessons developed by international NGOs, such as the Agha Khan Foundation (AKF), Mercy Corps International (MCI), German Agro Action (GAA), ACTED, and Care International. The Bank was also building on United Nations Development Program's (UNDP's) Rural Reconstruction and Development Program (RRDP) initiatives to strengthen governance at the Jamoat level through Jamoat Development Committees (JDCs) comprising elected representatives from constituent villages. The Project provided an opportunity to scale up these models in highland areas, and to strengthen linkages with local and national government.

Value of World Bank support. The Bank's comparative advantage relative to other donors came from its ability to work at all levels of the Government, conducting policy dialogue at all levels of Government – top, line ministry and local officials, and implementation assistance at the line ministry, and local level. The Bank's ongoing support to farm privatization and the National Social Investment Fund of Tajikistan (NSIFT) also complemented the Community Agriculture and Watershed Management Project (CAWMP). The Bank's value-added to CAWMP was: (a) providing capital for productive agriculture and land management investments at a scale beyond what other donors in the area could mobilize on their own; (b) encouraging community participation in the project design, implementation, operation, monitoring, and evaluation, building on the experience of projects financed by the Bank as well as other donors; (c) involving government and developing its capacity to play appropriate roles that foster the desired outcomes; and (d) experience in implementing similar projects in other countries (e.g., Turkey, Armenia). The Bank was able to share a wide range international experience, e.g., business and market development relevant to rural livelihoods, micro finance, feasibility and operation requirements for rural infrastructure, incentive structures for watershed management, knowledge generation and dissemination, and development of community institutions.

1.2 Original Project Development Objectives (PDO) and Key Indicators (as approved)

The Project objective was to build the productive assets of rural communities in selected mountain watersheds, in ways that sustainably increase productivity and curtail degradation of fragile lands and ecosystems.

Outcome indicators. The key outcome indicators comprised:

1. Eighty percent of farm productivity, land management, and rural infrastructure investments are successful according to agreed economic, financial, social, and environmental standards, and are being sustained.
2. At least half the households where the Project is operating (i.e. 32,000) directly participate in some part of the rural production component.
3. Increase in proportion of Project participants who are living above the poverty line from 3% to 30%.
4. Land and mountain ecosystem degradation trends halted (also pertains to GEF).

Output indicators. Implementation was to be assessed mainly on the basis of output indicators including:

1. Total cumulative investment in agriculture production among Project participants (from initial grant, local contributions, and reinvestment) exceeds US\$3.8 million, i.e., more than the projection of Project-financed grants and capital infusions (implying high participation, desirable social and environmental impacts, commercial success, use and repayment of revolving funds).
2. Land management investments cover 78,000 ha and benefit very poor at least in proportionate to their numbers in a community (also pertains to GEF).
3. Number of improved public facilities, disaggregated by type of investment (e.g., village drinking water, roads, and electricity).
4. Forty-seven JDCs overseeing rural production investments.
5. Forty percent of farm production and land management investments apply improved technologies, and receive good access to necessary inputs and knowledge.

6. Number of indigenous crop varieties from Project area preserved as live specimens (also pertains to GEF).

7. Satisfactory Project administration as indicated by Bank supervision ratings and Project's public reputation for integrity.

1.3 Original Global Environment Objectives (GEO) and Key Indicators (as approved)

The global environmental objective was to entail protection of globally significant mountain ecosystems by mainstreaming sustainable land use and biodiversity conservation considerations within agricultural and associated rural investment decisions. This integrated management approach was also to provide replicable models for comparable areas throughout the country. The GEF objective was mainstreamed into the overall development objective and outcomes.

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

The PDO was not revised. Revisions to key indicators were:

Original Indicator	Revised Indicator	Explanation
<i>Did not exist.</i>	Cumulative number of villages which have participated in credibility investments. ² [PDO]	Measures breadth of initial project implementation at the field level, as an early indication of PDO achievement.
Negative trends of land and mountain ecosystem degradation halted in Project Jamoats.	Area in ha covered by land resource management subprojects and other project activities that directly and successfully addresses land and mountain ecosystem degradation. ³ [PDO, GEO]	The original PDO indicator was not able to measure impacts due to practical problems of scale, seasonal variation, etc. The revised PDO indicator was a minor modification of an indicator which was originally classified as

² Credibility investments are the small initial grants for locally selected initiatives made to each participating village in order to build the trust and confidence of local people in the project, prior to the development of proposals for other rural production investment grants.

³ Confirmation that land resource management subprojects and US\$ value of other project expenditures (e.g., farm productivity subprojects, rural infrastructure subprojects, specific training programs, specific consultancies, etc.), in concept and then in implementation, include at least one of the following results on fragile lands:

- Prevent or reduce soil erosion by water or wind
- Increase vegetative cover through perennial crops and pasture
- Provide soil and moisture conservation
- Improve soil quality
- Improve water use efficiency
- Increase sustainable fodder or wood supply
- Increase sustainable renewable energy supply
- Increase integrated pest management
- Indigenous plant preservation

Original Indicator	Revised Indicator	Explanation
		“intermediate”.
<i>Did not exist</i>	Farmer-based guidelines and methods developed for market development in uplands, Jamoat-level pasture management, and gravity-fed irrigation. [PDO]	Measures results of final year of the Project after the extension of the closing date.
Area in ha covered by land resource management subprojects.	Total value in US\$ of land resource management subprojects designed and funded. [GEO, Intermediate Indicator]	With transformation of indicator on area covered by Project areas that address degradation from an intermediate to PDO result, a new intermediate indicator was required for land resource management subprojects.
Project participants have access to and adopt improved agricultural technologies.	Cumulative number of rural people who have received technical training from Tajikistan Academy of Agricultural Science (TAAS), Facilitating Organizations (FOs), or other Project partners. [Intermediate Indicator]	Original indicator was not feasible to measure.
Number of Jamoat Development Committee (JDCs) that have been established and are overseeing implementation of credibility and rural production subprojects – final target 47.	Number of JDCs that have been established and are overseeing implementation of credibility and rural production subprojects – final target. [Intermediate Indicator]	Change only in the coverage target, based on need to fit updated budget allocations within available financing.
Bank supervision ratings and reputation for integrity as perceived in public opinion surveys.	Project management ensures Project implementation timeliness. [Intermediate Indicator]	Original indicator not practical because of inadequate capacity to conduct surveys, and emphasis on integrity addressed through other mechanisms.
<i>Did not exist.</i>	Number of Project beneficiaries.	Added by World Bank as core indicator.
<i>Did not exist.</i>	Number of female beneficiaries.	Added by World Bank as core indicator.

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

The GEO was not revised. See table above for indicator changes.

1.6 Main Beneficiaries.

The primary beneficiaries were *Common interest groups (CIGs)*, and *individuals*, since they were the recipients of subproject grants for projects they identified and proposed.

Villages, and their constituencies, also received Project budgets for each of the three types of rural infrastructure investments.

Participants and members of the various institutional entities that facilitated decision-making, granting and implementation of subprojects including the: Jamoat Development Committees (JDCs), Facilitators and Specialists from the Aga Khan Foundation /Mountain Societies Development Support Programme (AKF/MSDSP), Food and Agricultural Organization (FAO), United Nations Development Programme (UNDP), Welt Hunger Hilfe (WHH), and other international NGOs, Watershed Development Committees (WDCs), and Project Coordination Units (PCUs) in each of the four watersheds.

1.7 Original Components (as approved)

Component I: Rural Production Investments. (US\$11.9 m)

A. Farm Productivity Improvement: Individuals, and groups of farming households, would invest in productivity enhancing activities of their choice, most of which would provide immediate income. Investments could include inputs for annual crops, horticulture, livestock, processing, distribution, leasing, and credit facilities.

B. Land Resource Management: This subcomponent enabled local people to adopt more sustainable use of fragile lands that are currently under the jurisdiction of the Jamoat, and provided land use certificates after three years of maintenance, subject to continued good land use. The combination of appropriate income-generating investments with soil conservation would enhance the organic content of soil and create incentives for sustainable land use by better addressing interests of local people. Groups of nine or more households working on contiguous areas would make long-term investments such as horticulture, woodlots, or fodder, combined with soil and moisture management structures. Blended financing from GEF would almost quadruple the land area covered beyond the level that will be supported by the government on purely national grounds.

C. Rural Infrastructure: Investments to rehabilitate rural infrastructure would be made to community groups. Typical investments would compliment agriculture and land resource management subprojects, would be small scale (about \$4800 on average), and could include drinking water, small irrigation, access track rehabilitation, and small power generation.

Contribution Requirements and Budget Constraints. Beneficiaries had to contribute their own resources in the form of labor, material and cash, for at least 20% of the total value of any investment. Investment proposals would be prioritized within formulaic fixed budgets for villages based on population. The share of all one-time, start-up grants to any one household would not exceed \$290. Farm productivity financing in subsequent years would be provided either through reinvestment of retained earnings or through credit or revolving funds.⁴ Rural infrastructure would be restricted to productive investments and include operations and maintenance financing arrangements. They would only be made if no alternative funding was available from other donor programs such as the National Social Investment Fund of Tajikistan (NSFT).

Component II. Institutional Support and Capacity Building. (US\$4.3 m)

⁴ From the newly created Micro-finance Bank of Tajikistan supported by, existing interest bearing revolving funds operated locally with donor support, or newly created member owned revolving funds building on the model developed under the World Bank-financed Farm Privatization Support Project (FPSP).

A. Research and Demonstration: This subcomponent helped scientific institutions and line ministries to provide technical services including training to communities. It would include support for seed and seedling production, livestock breeding and animal health and husbandry improvements, and market and enterprise analysis and development. Participating agencies included the Tajikistan Agricultural Research System (for research and extension and including preservation of live plant specimens in collaboration with the Consultative Group For International Agricultural Research's (CGIAR) Central Asia and Caucasus (CAC) unit in Tashkent). The Farmer's Training Center, Ministry of Agriculture and other Ministries and the State Committees such as Statistical Service, and Land Committee would also benefit. Blended GEF financing would support the preservation of indigenous crop and other specimens.

B. Community Mobilization and Subproject Preparation: This subcomponent included training and facilitation for Jamoat Development Committees (JDCs) as well as households and common interest groups with support of local facilitators (contracted through international NGOs). It also included support for small confidence building mobilization grants for each village, plus information and experience sharing. Blended GEF financing enabled the planning and sharing associated with the additional land resource management investments.

Component III. Project Management: (US\$3.6 m)

This component supported project coordination, procurement, disbursement, financial management, reporting, monitoring, and evaluation, at both the national level and for each of the four Project watershed areas. It built on project administration capacity and arrangements that already existed for ongoing Bank-financed projects. The component also supported the secretariat services provided to the State Level Steering Committee (SLSC) and the Watershed Development Committees (WDCs). The component supported:

- National Project Management Unit,
- Project Coordination Units for the four watersheds, and
- Evaluation

1.8 Revised Components

Components were not revised; however various planned targets were modified during implementation upon realization of on-the-ground conditions. For example, at the time of the Mid-term Review in 2008 (MTR), the Bank team concluded that, *"The number of households directly benefiting from subproject investments is likely to at least meet the original target of 32,000, even though the total number of households living in the participating villages is likely to be 57,375 compared to the appraisal target of 62,000 because the percent of direct beneficiaries is higher than expected. The number of participating villages is likely to be 409, compared to the appraisal target of 404, and the number of Jamoats is likely to be 39, compared to the appraisal target of 47. The number of villages per Jamoat was higher than anticipated and, together with higher than anticipated costs of facilitation support and of JDC/JRC support, this has increased the unit cost of project support per Jamoat."*

1.9 Other significant changes

A few minor restructurings occurred during the Project. Changes in expenditure financing percentages and reallocations between expenditure categories were made in the Development Financing Agreement (DFA) and GEF Grant Agreements in 2004, 2005, 2008, and 2011. A Project extension closing date of one year was approved from April 30, 2011 to April 30, 2012 for the IDA credit – to: (a) enable the

Project to address further requirements related to irrigation, pasture management, and market development; and (b) complete the impact evaluation and to disseminate findings. In April 2011 several revisions were made to ensure that past legal amendments and current updates of the cost estimates were accurately and consistently reflected in the official financing and cost data. For example, as of April 2011, costs were lower than expected at the MTR due in part to changes in the exchange rate and also because some of the specific activities expanded less than expected (e.g., micro-finance, discretionary budget for subprojects, expansion of Facilitating Organization support), or had lower unit costs (e.g., PMU staff expenses).

Components/Activities	Project Costs (US\$ Million)				
	Appraisal Feb, 2004	Effectiveness Nov, 2004	MTR May, 2008	Proposed April, 2011	Actual September, 2012
Rural Production Investments	11.90	11.34	9.99	9.61	10.69
Institutional Support and Capacity Building	4.30	3.60	5.14	4.71	4.90
Project Management	3.59	3.03	3.64	3.85	3.72
Total	19.79	17.97	18.77	18.17	19.31

Similarly, the financing plan was updated (April, 2011) to reflect previous revisions, taking into account updated estimates of the Government counterpart expenditures, as well as fluctuations in the US\$ equivalent value of the IDA Credit and Grant. The update also corrected earlier estimates of Government counterpart (and hence the total amount of financing) which did not correctly reflect the Government financing requirements associated with the agreed IDA and GEF financing disbursement percentages.

Financing Source	Project Financing (US\$ Million Equivalent)				
	Appraisal Feb, 2004	Effectiveness Nov, 2004	MTR May, 2008	Proposed April, 2011	Actual September, 2012
Government of Tajikistan	2.00	0.74	0.74	0.36	0.58
Beneficiaries	2.49	1.93	1.93	1.92	3.40
IDA Credit	5.00	5.00	5.40	5.24	4.93
IDA Grant	5.80	5.80	6.20	6.16	5.91
GEF Grant	4.50	4.50	4.50	4.50	4.49
Other Financiers	0.00	0.00	0.00	0.00	0.00
Total	19.79	17.97	18.77	18.17	19.31

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

Project background analysis was satisfactory. Background preparation took into account the World Bank's previous engagements on land management, tenure security and poverty alleviation in Tajikistan (e.g., the Farm Privatization Support Project (FPSP), Rural Infrastructure Rehabilitation Project (RIRP), Pilot Poverty Alleviation Project (PPAP), Second Poverty Alleviation Project, and also from Turkey's Eastern Anatolia Watershed Rehabilitation Program).

The Project also drew from the experience of other donor activities and developed a new model that took into account several important lessons:

The participatory process cannot be target driven. The design of the institutional structure and sub-granting mechanisms clearly demonstrated a participatory approach whereby the ideas came from individuals – and the CIGs were instrumental in bringing together people and ideas. This was in contrast to the past where most activities focused on humanitarian aid rather than support for rural agricultural production – which was a foreign concept for local people. Ultimately, changing this perception and attitude became one of the more important challenges at implementation.

Design and implementation should build on existing mechanisms with suitable external TA. The Project drew on the existing institutions – such as the JDCs built under the UNDP Rural Reconstruction and Development Program – and reinvigorated them towards a new development goal. JDCs continued their existing decision-making capacity, but were transformed to act as a clearinghouse for CIG and village investments, identify new sources of funding and facilitate clearances and registrations for subprojects (see Annex 6 in PAD for details on their role). Other NGOs were engaged as facilitators to assist villagers in preparing proposals and JDCs in monitoring and activities.

Training should be timely and appropriate. Training as a prerequisite before investment was integral to sustainability – since local knowledge contained gaps in more modern and environmentally-sustainable techniques. For example, individuals participated in training of pasture management and animal husbandry by the Institute of Husbandry Tajik Academy of Sciences and the Agrarian University of Tajikistan.

Long-term sustainability requires community involvement early on and full awareness of the level of operating expenses that will be required to maintain the investment. Participation by and consultation of local communities and individuals at the outset better ensured the financial sustainability of investments. The financial management aspect of farm and rural investments was part of the initial training package to precede investment.

All stakeholders need to be included. Project preparation activities involved all key stakeholders: national, raion and Jamoat level authorities; NGOs; local communities including village elders, *mahalla*, farmers, livestock owners, and women. Key stakeholders who would be involved directly in the Project include village leaders and village members, women, local government representatives, technical staff of the line ministries located primarily at the raion level, and staff of the PIUs and existing PMU at the central level. NGOs would provide technical assistance during the facilitation and proposal development phase at the village level and JDCs would act as decision-makers and comprise of elected officials from the communities.

The rationale for Bank intervention was sound. Inclusive to the rationale provided in section 1.9, the Bank was well-positioned to undertake a bottom-up approach from its experience in local institution building, community-driven and participatory methods and the ability of providing sufficient resources to make an impact (scale). The World Bank sought high-level support such that Project outcomes and recommendations could be factored into higher-level decision-making and reform. For example, this was particularly important for the continued effort of issuing land certificates to individuals – which, at the outset of the Project, was a slow, uncertain and cumbersome process.

Project design was generally sound. Project components were designed appropriately around the overall objectives with an emphasis on improving rural production (retained earnings) and meeting rural infrastructure needs at a local level. To effectively enable and sustain investments there was sufficient allocation given to the components on institutional support and capacity building – especially

on research and demonstration which had been shown to be one of the most effective ways in conveying best practice. The geographical target areas were known to be very poor and vulnerable with relatively few income or diversification opportunities. The social assessment surveyed individuals in the watershed areas of Zerafshan, Surkhob and Toirsu identifying opportunities and institutional structures that could be developed to support Project objectives – while respecting the traditional informal institutions for collective action like the *hashars*⁵ – organized through traditional leadership structures of the *mahalla*.⁶ A considerable amount of thought and effort was then put into the development of the implementation arrangements through the system of institutions and stakeholders to ensure investments would remain locally-driven and screened by a transparent member body (JDCs) and process (see Annex 6 of the PAD on Implementation Arrangements).

Project alternatives were rejected on sound reasoning. By focusing on highland areas the focus was on the poorest experiencing the most severe land degradation – but complementing existing lowland area initiatives. Rather than working solely with village-level institutions – the Project strengthened Jamoat-level institutions to better coordinate community initiatives. This was also viewed as a more efficient and cost-effective method than supporting every village. But in this regards, granting funds from the bottom-up was also considered a better model than the previous top-down approaches – where the record of such investments was uncertain.

Most risks were adequately identified and rated; mitigation measures were adequate. Risks identified in the PAD were adequately supported by mitigation plans – however several came to fruition despite best efforts (more on this below). Some risks are inherent in Community-Driven Development (CDD) schemes and given the lack of experience with this form of support in Tajikistan at the time – a more robust set of mitigation alternatives could have been developed as backup plans.

2.2 Implementation

All outcome and intermediate targets were exceeded before Project closing. This includes the key outcome indicators of the percentage of successful and sustainable rural production investments (85%), number of participating households (>43,000), percentage of the population above the poverty line in Project villages (30%), and the number of participating villages (402). It also includes the area of land under sustainable management (GEO indicator: 96,000 ha). Many of these targets had sufficient momentum even by the MTR in 2008. The main contributing factor in realizing these outcomes were the arrangements at the watershed level including partnerships between villages, common interest groups, JDCs/JRCs, Project Coordination Units (PCUs), WDCs and Facilitating Organizations (FOs). Effective coordination, although inexperienced at first, eventually took hold as demonstrations and first entrants were observed and lessons learned.

In terms of challenges there was an initial one-year lag in activity due to a combination of reasons. First, there was inexperience within the PMU in contracting Facilitating Organizations and unfamiliarity with the Project's concepts and innovative partnership arrangements. The response was to increase capacity in financial management and procedures that were congruent with Tajikistan's accounting methods and to seek clarity on the roles and responsibilities of FOs. Second, there were differences of interpretation in Project design and procedures among the output-based partnerships with the FOs (AKF/MSDSP,

⁵ *Hashars* are Tajik community groups that get together to work on community projects that benefits everyone, such as improving the roads or cutting hay that everyone can use.

⁶ Traditional *mahalla/jamiyat* institutions are the most important organizing force in project area hamlets. The community selects their leaders somewhat democratically, although about half the leaders typically make decisions by themselves, while the remainders make decisions through councils or hamlet-wide discussions.

FAO, UNDP and WHH). Subsequent meetings orienting the FOs to the objectives and procedures resulted in a more effective arrangement after the first year. Thirdly, there was an initial lack of understanding at the local level of the procedures outlined in the Operational Manual for environmental analysis, business plans and the design of rural infrastructure. This resulted in the FOs and PMUs playing more hands on role during the first trials in each area. Ultimately, by the MTR, many of these issues had been resolved and disbursement increased significantly.

The Project was identified as a potential problem project in the first few years because of a lagging Component 1, but actions taken on both the World Bank and counterpart side guided the Project on track. Minor restructurings took place – but mostly pertained to reallocations across expenditure categories and simplifying disbursement procedures (see section 1.9).

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

The key outcome and intermediate performance indicators listed in section 1.2 were adequate in tracking progress towards achieving the PDO and GEO, although indicator #4, “Land and mountain ecosystem degradation trends halted” appeared ambitious through the rather expensive methods suggested in the PAD (Annex 3). Revisions to the indicators were undertaken at the time of the MTR reflecting implementation experience such as changing coverage to 39 Jamoats from 47 due to cost considerations as well as the base number of households. These changes were reflected in amended supplemental letter to the DFA.

Design. The M&E framework was designed to measure results at a very local scale – hence sufficient capacity would have to be built at the Jamoat-level. Project progress and outcomes were measured through feedback mechanisms suited to limited capacity and challenging conditions. Data collection methods included regular progress and financial reporting by Project partners, field supervision visits and partner workshops. Project and watershed-level assessments were also conducted, and a final impact evaluation was planned. The PAD suggested the contracting of an M&E and financial specialist at the JDC-level, however these functions were eventually separated with one financial and one M&E JDC specialist. The initial design for some aspects of M&E was ambitious given the cost and local capacity to implement them. For example the use of satellite imagery to measure land degradation trends was beyond local IT capacity, let alone costs. Other measurable indicators through direct observation, or field visits, were more practical and resulted in more timely monthly reports that aided implementation.

Implementation. Monthly reporting was undertaken by all major Project partners that allowed for Project management to aggregate data and findings. This was especially important given the scale of interventions and scope of Project coverage. For example, the challenges posed with monitoring land degradation (cost and capacity) resulted in the decision to change the indicator to measure the aggregate area covered by subprojects and other project activities which directly support sustainable land management (see section 1.4). The Project made use of central and site-based project units, along with Project partners such as NGOs and research institutions to record, measure and verify results. A central database of rural investments was maintained with qualitative and photographic data collected to improve data quality and analysis as well as overall Project assessments.

Overall monitoring was assessed as satisfactory throughout most of the Project, except in a couple of instances where environmental monitoring needed strengthening. One unfortunate circumstance, by the time of the MTR, was the inability of the contracted socio-economic survey to generate data of sufficient quality and quantity for a comprehensive project baseline. Poor communication with the consultants about required tasks and significant cultural/academic differences about what constitutes primary baseline data useful for Project monitoring and evaluation purposes contributed to the generally

inadequate data and associated analysis. In response, an effort was made to collect sufficient secondary information at the raion-and watershed-levels in order to establish some baselines.

Utilization. M&E data contributed to adaptive management in the Project, e.g., systematic use of the Results Framework and careful review of its underlying assumptions led to MTR corrections. M&E data were also used to share project concepts, results and lessons learned with government, donors and civil society. Data utilization, and its feedback into project implementation, was crucial in measuring progress towards the PDO and GEO. For example, by the time of the MTR it was evident that covering 47 Jamoats was basically not affordable and would stretch resources far too thin – so the decision was made to focus on only 39. M&E was integral in tracking the outcomes from thousands of subproject proposals, where information on successes (or failures) could be replicated (or avoided) in other areas. It was important to identify and highlight positive demonstrations that could replicate best practice.

2.4 Safeguard and Fiduciary Compliance

Financial Management. The PMU was staffed by a Chief Accountant, an accounting assistant and supported by the FM specialist. Financial management received unqualified (clean) audits throughout the Project's life and delivered regular reports that informed project management, but began to struggle just before the MTR and was rated *moderately satisfactory* thereafter. This was due to several reasons. First, and as mentioned above, some delays were due to the PMU's inexperience with contracting FOs and this led to delays in direct fund-flows to the JDCs in the earlier years. Difficulties in finding technical assistance in this area also contributed to the delays. Subsequent training and experience with these types of granting mechanisms eventually rectified the issue. Second, regular Financial Management Reports (FMRs) identified deficiencies in IFR reporting, weak controls at some points or discrepancies that were not fully explained. Thirdly, the recommended accounting software (1C) was never fully capable of providing timely and accurate reports in the manner which was acceptable to the Bank – which meant a lot of manual work in spreadsheets – leading to delays and some inaccuracies. Frequent technical support was necessary and only came up to standard by the end of the Project. While each of these issues was eventually dealt with – the chain of events kept financial management from achieving a satisfactory rating.

Counterpart financing was lower than originally agreed also at the MTR (US\$0.59 million versus US\$0.74 million) and replenishments were delayed a few times – although it did not severely jeopardize implementation. Part of this was connected to the financial crisis (beginning in 2009) when austerity measures led to smaller allocations being transferred. This required frequent monitoring to ensure it was not in violation of the counterpart financing parameters in the DFA.

Procurement. According to the PAD, procurement had both centralized and decentralized roles. The PMU had the overall responsibility for the Project, including the management and supervision of Project procurement activities. Procurement of Component 1 activities was carried out by the common interest groups (CIGs) and households undertaking subprojects, with community participation in accordance with the Operational Manual (OM). The PMU, in collaboration with the PCUs and JDCs, was responsible for providing guidance and supervision necessary to ensure that CIGs and households procure in accordance with procedures outlined in the Operational Manual. A memorandum of understanding (MOU) between the JDC and the subproject beneficiary was used to address procurement aspects. The PMU was staffed with a full-time procurement specialist; however this person was initially divided among other projects until the MTR which contributed to the lagging procurement performance outlined below.

Due to the lack of clarity of contracting FOs in the initial stages and a lack of understanding at the CIG-level of OM procedures, procurement experienced delays for the first two years of the Project and was

subsequently downgraded from *satisfactory* to *moderately satisfactory* by 2006. This affected fund flows to Component 1 subprojects and to the overall downgrading of the Project. In response, internal capacity was quickly built up through extensive training and the FO contracting and OM issues were resolved by consultations with FOs and the CIGs. By the MTR these major issues were no longer present and procurement performance remained *satisfactory* until the end of Project. A multi-project fiduciary review conducted in 2009 commended the community procurement of rural investment projects under the Project.

Disbursement. Overall disbursements were ahead of original expectation by 2007, however Component 1 flows to subprojects were delayed because of the implementation issues raised above. By the time of the MTR, this was no longer an issue and all funds were fully disbursed by project closing.

Environmental Assessment. For Environmental Assessment (EA) purposes the Project was rated “category FI” under the World Bank Safeguard Policy OP 4.01, since the Project involved funds for subprojects selected by the communities during implementation. The environmental impact of the Project activities were expected to be largely positive and would not involve any major construction requiring resettlement, land acquisition, or invest in the construction of dams, new canals or head works that would allow for increased water abstraction. The EA included an assessment of the benefits and risks of project activities and an environmental monitoring subcomponent and Pesticide Management Plan (PMP) for compliance with OP 4.09; because activities would be supporting agricultural production.

The Environmental Assessment was discussed in consultation (2003) with stakeholders in each of the Project watersheds, as well as at the national level with participation of local people, representatives of local authorities, line agencies, other government officials, and NGOs. The Project provided support for a full-time Environmental Specialist tasked with implementing the environmental monitoring of activities and compliance with safeguards, as well as training programs for line agency staff, subproject proponents, other stakeholders, and equipment for simple environmental analysis and monitoring.

Compliance with OP 4.01 and OP 4.09 was rated satisfactory throughout most of Project implementation with a few exceptions, the first in 2007 when the Environment Manual required updating and greater attention paid to the implementation of the environmental monitoring of subprojects. In 2008 the PMP was urgently needed to be in place because there was anecdotal evidence of certain pesticides being recommended by advisors – which could have violated OP 4.09. In addition a full-time Environmental Specialist was not internalized until 2009; relying on part-time consultants before this. By 2010 environmental monitoring activities were well underway delivering important information on the amount of land under sustainable management and compliance with safeguards. In addition, training in Integrated Pest Management (IPM) has also been completed to instill knowledge on more environmentally-friendly techniques to pest management – than through the use of pesticides and excessive use of fertilizers.

Social Safeguards. No social safeguards were triggered by the Project – but public participation was rated highly satisfactory throughout the Project due to the focus of Component 1 on local communities. A Social Assessment was undertaken for the PAD (Annex 17) including a survey among individuals in Project watershed areas. The Project was expected to result in increased equity, community empowerment and social inclusion – and central to this was greater gender equity in decision-making. A core indicator on gender was added to the Results Agreement after the MTR – and although crudely measured - showed that approximately 40 percent of subproject beneficiaries were women.

2.5 Post-completion Operation/Next Phase

Sustainability. The Project's design of inclusive community-driven development contributes to the sustainability of rural investments. Decisions were made at the local level on what investments to implement, who should benefit and the distribution of financial resources across Component 1 categories thus building ownership. Capacity was internalized since villagers were responsible for financial management and procurement of investments and took into consideration economic, environmental and social/institutional considerations. For example, they had to provide evidence of cash flow and cost recovery arrangements for 3-10 years depending on the type of investment, environmental conservation and mitigation measures, and the establishment of organizations such as water user associations to support long-term operations. The beneficiary contribution requirement (which eventually totaled US\$3.4 million) also helped build ownership and contributed to the sustainability of these investments.

Replicability. Demonstration is one of the most powerful mechanisms for learning and the Project generated numerous examples of this. First, the CIG decision-making model itself with inclusive and representative coordination of subprojects demonstrated that CDD investments can indeed be undertaken, even in a social context more familiar with only humanitarian aid. Second, pilots in specific areas resulted in knowledge of what worked and what did not. This knowledge can now be used within the community to replicate successes that benefit the individual and the environment. Third, by operating at a watershed and Jamoat level – cross-fertilization of ideas can spread even further than traditional boundaries.

The Government's commitment in sustaining and replicating the success of CAWMP is also demonstrated through its recent consideration of the *Environmental Land Management and Rural Livelihoods Project* (ELMARL) to be jointly co-financed through the Pilot Program for Climate Resilience (PPCR) and the GEF. Modeled after CAWMP – it will include components on building rural productive assets, including sub-components similar to those under Component 1 of CAWMP and local knowledge management that will support rural populations in planning, implementing and managing rural investments.

Other key actions that contributed to sustainability and replicability are given in the table below.

Table of Key Actions Contributing to Sustainability and Replicability of Outcomes

Action	Economic	Environmental	Social/Institutional
<i>Sustainability</i>			
Beneficiary contribution requirement	The requirement that beneficiaries contribute at least 20% of the total rural investment costs (including 5% in cash for rural infrastructure) helps build ownership of the investment and contribute to overall sustainability.		
Project awareness raising, e.g., meetings, workshops, etc.			Attended by more than 70% of beneficiaries strengthening the knowledge base.
Extension period activities (April 2011-2012)	Market development support to help ensure income from current and future production.	Replicable Jamoat rangeland management plan guidelines; gravity-fed irrigation support for broader watershed management.	
Land Use Rights Certificates	821 certificates issued in Project sites providing greater security to groups carrying out agricultural and environmental investments and contributing to sustainable management of fragile lands and sustained income.		
<i>Replicability</i>			
Dissemination	Materials were prepared, published and shared in the following formats: a book on		

activities on experience and knowledge generated	Project achievements; Project leaflets; several technical brochures with different topics; 3 radio programs were broadcasted; a 20-minute film about Project achievements in watersheds; published articles in the Republican newspaper and agriculture magazines. Materials distributed among ministries, agencies, research institutes, international and national NGOs.
Replicable subproject models for small farmers	On average 2-3 subprojects are being independently replicated in each village by individuals; with an estimated 800 replications for entire Project. The most common were in horticulture, bee-keeping and woodlots.
Farmer competitions	Created awareness of good practices that can be replicated extensively by small farmers for pasture management, efficient irrigation technologies and integrated pest management.
Demonstration of CDD in Tajikistan contributing to IFAD Khatlon Livelihood Project and adoption by other organizations	CAWMP concept and approach was adapted for a large scale 6-year IFAD project in Khatlon (18,000 households) focusing on 3 components: 1. Rural productivity investments; 2. Institutional capacity building of local structures; and 3. Project management with similar grant approval committees. Adoption of elements of CAWMP's approach with organizations, e.g., NRM aspects by AKF/MSDSP for village planning.
Government initiative to request further support, and linked to other programs.	Request letter from Deputy Prime Minister, and Endorsement of GEF Application by Committee on Environmental Protection. This is in relation to the ELMARL project described above. Although, rural investments under CAWMP are designed to be sustainable, new financing would enrich the benefits from such investments to beneficiaries (i.e. depth) as well as replicate activities in new locations (i.e. scope).

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

The Project's objectives were aligned with country-level priorities in the PRSP and World Bank's Country Assistance Strategy 2003-2007 at the time (see PAD, page 5-6) and remain so today. Objectives are also consistent with the current Country Partnership Strategy's 2010-2013 (recently extended until 2014) goal of *reducing constraints to a post-crisis recovery and sustained economic growth* (page 16) which includes increasing the productivity of physical assets such as land, water and human capital. It is also aligned with the objective of agricultural reform viewed as being critical to enhance productive capacity and reduce rural poverty (pages 17-18). Each of these falls under the overarching CPS pillar of *paving the way for post-crisis recovery and sustained development* (page 27).

The Project's objectives are also aligned with strategies and policies of the Government of Tajikistan. The National Development Strategy (2015) and Poverty Reduction Strategy III (2012) both emphasize the need to promote economic growth, especially in rural areas, and recognize the importance of addressing environmental issues, including land management, for the country's development and poverty reduction goals. The government is also working to expand agricultural capacity through measures to improve land tenure security and independent farm management through its Freedom to Farm policy. The National Environmental Action Plan also states that a primary challenge for the country is land degradation, including deterioration of pasturelands, arable and irrigated lands and forests.

3.2 Achievement of Project Development Objectives and Global Environment Objectives

Project Development Objectives were achieved as indicated by the percentage of sustainable subprojects (85%) and by the area of Project land now under sustainable land management (96,600 ha) (outcome indicators #1 and #4). Indicative Component 1 investments included livestock production, poultry farming, bee-keeping and horticulture (see Annex 2 for details). The cumulative number of

households in Project areas that undertook rural investments was greater than 43,000 (outcome indicator #2) and of those 50 percent are now above the poverty line (outcome indicator #3).

The Global Environmental Objective of integrating sustainable principles into agricultural and rural development decisions was achieved through 1) the number of hectares under sustainable land management (96,600), 2) integration of environmental monitoring and impact assessment into rural subprojects, and 3) through the replication of best practice to other areas of the country - over 9,000 trained (intermediate indicator #4). Another globally relevant outcome was the preservation and documentation of live indigenous plant specimens. Several expeditions were made by the Institute of Botany resulting in the identification of over 300 endemic and rare plant species including fruit trees. The Institute also updated the Tajikistan Red Book with their findings.

Other specific outputs supporting each outcome indicator are detailed in Annex 2.

3.3 Efficiency

The economic and financial analysis conducted in the PAD analyzed how farm productivity improvements could translate into increased retained earnings and thus reducing the percentage of people below the poverty line. With the Project, the proportion of Project participants above the poverty line would increase to 44% by 2011. Detailed monitoring information at the farm-level of productivity gains was not available for comparison – however improvements in income were estimated as part of monitoring and evaluation activities. Outcome indicator #3 shows that approximately 50 percent of Project beneficiaries are above the poverty line – suggesting that the Project was economically efficient and effective.

A GEF incremental cost analysis (ICA) was also undertaken at the time of appraisal in order to justify GEF funding (see PAD Annex 15). The baseline cost of the Project was US\$14.4 million with an incremental cost to be supported by the GEF of US\$5.4 million.⁷ The Project cost at closing was US\$11.42 million (IDA Credit, IDA Grant, and borrower) with beneficiaries contributing US\$3.4 million (in-kind, but even more than projected) along with contributions from FOs⁸ and other grants.⁹ Project targets were exceeded in all instances, thus the realized benefits were greater than initially estimated – and at a lower overall project cost. Thus, the Project can be considered efficient. For details see Annex 3.

3.4 Justification of Overall Outcome and Global Environment Outcome Rating

Rating: Satisfactory

The PDO and GEO remain highly relevant for local rural development and global environmental protection and in meeting the objectives of the Government of Tajikistan and the World Bank. The PDO was achieved, and surpassed in all outcome and intermediate indicators, and the GEO was achieved through the integration of sustainable land management practices at the local level and in rural

⁷ It was assumed that the GEF contribution (US\$4.5 million) would also leverage US\$0.9 million in beneficiary support for a total of US\$5.4 million.

⁸ Facilitating Organization (FO) contributions: AKF/MSDSP – US\$100,000.00; UNDP - US\$84,000.00; WHH – US\$345,000.00

⁹ Separate Bank-executed project on Capacity Building in Geospatial Analysis (US\$160,000.00) and DfID-funded Rural Vulnerability and Resilience Study (US\$200,000.00).

development decision-making. Overall Project costs were lower than anticipated, beneficiary contributions exceeded expectations, and thus results were achieved in a cost-effective manner.

3.5 Overarching Themes, Other Outcomes and Impacts

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

Poverty, gender and social development were all part of the objectives of the CAWMP. Poverty, as indicated above was reduced among Project participants. Female participation in subprojects was also a main goal of the Project and as outcome indicator #7 suggests over 40% of project beneficiaries were women. Social development can be defined in this context as expanding participatory methods (a la CDD) in decision making through the CIG model. Greater social cohesion can also be claimed through the sharing of experiences and interactions across Jamoats and watersheds.

(b) Institutional Change/Strengthening

The model introduced under the Project was completely new for Tajikistan. It was contrary to the humanitarian aid-type of development that rural communities and the donor community was use to. In this regard, institutional strengthening occurred at many levels. First, at the local- and watershed-levels through the participatory methods of the CIG model mentioned above, it built local knowledge of best practice not only in productive asset building, but also with business plans, fiduciary requirements and environmental impacts. Second, the Project also supported increased knowledge at the PMU and Government levels of how bottom-up approaches can be successful. Finally, among other donors – it demonstrated a new way of doing development in a country where a substantial proportion of the population live in rural areas and that local empowerment can improve livelihoods - if the will is there.

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

In 2010 the CAWMP won the World Bank award for “*Improving the Lives of People in the Europe and Central Asia Region*”. The Project was recognized for its achievements in improving rural livelihoods, increasing agriculture production, improving land resource management including pasture improvement, rural infrastructure rehabilitation, and involving the rural population.

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

A comprehensive survey of beneficiaries was not undertaken however interviews were conducted with a representative sample of subprojects. These are summarized in Annex 5.

An important, and related, study on *Farmer and Farm Worker Perceptions of Land Reform and Sustainable Agriculture* was undertaken in 2011 to examine farmer perceptions in Project areas¹⁰ that supported farmland restructuring and sustainable agricultural land management practices among rural households. Several CAWMP areas were surveyed and it was found that farmers do indeed perceive improvements in their livelihoods and “Freedom to Farm”.¹¹ The executive summary is also attached in Annex 5.

¹⁰ Project areas of several projects including: World Bank - Land Registration and Cadastre System for Sustainable Agriculture Project (LRCSP); World Bank - CAWMP; USAID – Land Reform Project in Tajikistan (LRPT); DFID – The Rural Growth Program (RGP – 2010-2012).

¹¹ That is, farmers feel as though they have control over the use of their land; and the farming decisions they make.

Numerous workshops were held over the life of the Project – on demonstration, training, methods, Bank procedures, etc. In terms of outreach the PMU was also very active and disseminated many types of information to the rest of the project constituency. These are summarized in Annex 6.

4. Assessment of Risk to Development Outcome and Global Environment Outcome

Rating: Moderate

As outlined under sustainability and replicability the objectives of CAWMP remain a priority for the Government and it is likely that support in these areas will continue. Many of the realized benefits at the local-level are cost effective and likely to be sustained through self-initiative in preserving retained earnings. The new World Bank project (ELMARL) will build on the achievements and lessons learned under CAWMP to expand support for climate change resilience (under grant funding from the PPCR). The Government's commitment under the National Development Strategy (2015) and Poverty Reduction Strategy III (2012) also targets rural areas and agriculture as a central focal point.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Satisfactory

The Bank identified an area of support that was and remains relevant to Tajikistan, rural livelihoods, sustainable land management, as well as with the global commons (biodiversity conservation). Core Project activities focused on supporting a bottom-up, participatory approach that would instill local ownership of subproject investments and build capacity to ensure its sustainability from an economic, social and environmental perspective. The balance of components was appropriate – giving greater weight to subproject investments but supported through sufficient capacity building efforts in Component 2. The scope was ambitious, at a scale that could demonstrate results and drew on lessons elsewhere - but Tajikistan remained untested ground for CDD-type projects.

The Bank correctly identified institutional capacity issues as a significant risk at the outset of the Project and had mitigation plans in place however it may have underestimated the extent to which this was true (more on this under Section 6. implementation). Given the rather complex institutional framework to implement subprojects - it might have been worthwhile to do an institutional analysis to identify possible facilitating and contracting constraints to the CDD model.

(b) Quality of Supervision (including of fiduciary and safeguards policies)

Rating: Satisfactory

The Bank closely supervised Project implementation through semi-annual (or more frequent) missions and, fiduciary reviews and also maintained a constructive dialogue between the PMU, the PCUs, JDCs, WDCs, FOs and other stakeholders. Issues raised were addressed in a timely manner and were candidly reported in official documentation – along with critical path milestones.¹² For example, when delays in subproject flows appeared, an emphasis was placed on strengthening weak areas such as procurement

¹² The Aide Memoires were thoroughly detailed and noted for identifying issues and their resolution.

and training was initiated to support this gap. However, overemphasis on subproject fund flows led to a lack of focus on other components such as environmental monitoring and this became an issue by time of the MTR.¹³

The Bank maintained focus on the fulfillment of Project objectives, and these were met or surpassed in many cases, but the underestimation of local capacity was a cause for slow disbursement and procurement issues in the beginning. Unfamiliarity with contracting FOs in this context proved to be problematic since there was no precedent in these types of contracts and when combined with the local unfamiliarity with the OM implementation lags were encountered. This translated into greater attention being paid to the fund flow issues from 2005-2007. Greater guidance to the PMU on how to resolve these issues was warranted.

(c) Justification of Rating for Overall Bank Performance

Rating: Satisfactory

World Bank support to the Government of Tajikistan in preparing and implementing the Project is rated as satisfactory largely due to its relative responsiveness to issues and adaptation to unpredictable circumstances. Closer attention to local capacity issues – and their appropriate resolution such as an institutional analysis may have greater impact on mitigating this risk.

5.2 Borrower Performance

(a) Government Performance

Rating: Satisfactory

Government was supportive of the Project and provided the necessary facilities for project management and coordination, including field facilities. The Ministry of Agriculture, State Land Committee, Committee on Environmental Protection and State Committee on Investments provided regular assistance to support implementation of Project activities. The State Land Committee also provided assistance to the Project for the issuance of Land Use Rights certificates for Project beneficiaries. However, Government counterpart funding delays were encountered during the economic crisis (around 2009) and eventually led to a slight under-commitment according to the DFA.

(b) Implementing Agency or Agencies Performance

Rating: Moderately Satisfactory

The PMU, as the main implementing agency, remained committed to the Project and provided satisfactory support to the JDCs, WDCs, and CIGs on daily issues and in resolving problems. This was evident from the many interactions with stakeholders to resolve issues such as the FO contracting issue and the lack of understanding by CIGs on the OM. In some instances there were changes in staff or vacant positions that led to some delays. For example the Environmental Specialist position for environmental monitoring purposes was occupied only on a part-time basis until 2010 and at times other specialists were divided among other projects. While the PMU was experienced in certain areas, the country itself had little or no experience with CDD-type projects which hindered progress in the first few years. The PMU was able to overcome most procurement and monitoring issues, but some financial management issues persisted throughout the entire Project. Renewed efforts, momentum and

¹³ Of course, it should also be understood that a lack of subprojects meant little to monitor and evaluate.

subproject flow after the MTR demonstrated the PMU's significant contribution to the Project in meeting, and exceeding, its targets.

(c) Justification of Rating for Overall Borrower Performance

Rating: Moderately Satisfactory

Overall borrower performance is rated as *moderately satisfactory* taking into account the PMU's commitment to achieving the PDO, GEO and the Government's support of the Project. Despite the initial two-year lag in subproject granting, actions taken by the PMU and local stakeholders led to the achievement of the PDO and GEO. The rating is moderately satisfactory - the lower of the two individual ratings on Government and Implementing Agency Performance ratings as per ICR Guidelines.

6. Lessons Learned

Project design

Direct investment support to farmers through a systematic small grants program, coupled with facilitation and training built entrepreneurial capacity through a learning-by-doing approach. Farmers assumed responsibility for sustaining their livelihoods in financially and environmentally sound ways. This move toward self-reliance represents a dramatic shift from the culture of dependency associated initially with Soviet-era subsidies and then post-conflict emergency food aid.

Participatory planning along with village and household budget limits was an effective mechanism for villagers to prioritize and assess risks of various options, as well as allocate resources. Furthermore, open disclosure of available funds and amounts allocated to investments improved accountability. To further disseminate this aspect, the process and results need to be documented and then shared widely with government, donors and other implementing agencies and organizations so that similar measures can be included in future planning processes.

A multi-stakeholder approach to project implementation was worthwhile even in the Tajik context where limited prior experience and local conditions made management challenging. In addition to generating expected project outcomes, this approach improved project transparency and accountability, increased respect for partners' strengths and provided new learning opportunities for Project participants. New forms of collaboration between government, international agencies, NGOs, scientists, and local community groups highlighted their respective strengths, e.g., there is greater respect for the capacities of villagers and traditional knowledge. The learning process has been experiential with project partners sharing good practice, e.g., site and personnel exchanges.

Right of Use of Land Certificates (RULC) is key for sustainability, especially for land-related subprojects in CAWMP and for other similar initiatives. According the CAWMP design the RULC should be issued after 3 years of successful using of subproject (land). However, during Project implementation and the RULC issuance process - it was evident that the RULC should be given after 1 year after subproject startup or less. This increases the confidence of farmers to use the land as a real user and owner, and the certificates should be issued without delay.

Although it was not in the Project objectives to address broader policy and legal issues related to pastures and rangelands, sustainable rangeland management will require policy and legal support informed by practical, field-based examples and experiences such as those implemented in CAWMP. The Project reduced overgrazing pressure locally within villages' territories through several types of

subprojects and demonstrated activities contributed to sustainable rangeland management. Grazing rights are a sensitive topic because it involves several types of farmers with potentially conflicting interests (family farmer, sheep farmer, *Dehkan* farms, and commercial private stock breeder) and might require new legislation and /or law enforcement.

Research and demonstration of appropriate technologies can be integrated differently at Project design. The success of the Farmers Competition shows that agricultural innovation and good practice can be demonstrated and shared in an efficient and effective way. While research institutes have shown limited practical skills for small-scale, upland farms in terms of approach, new technology introduction is still a high priority as it increases the value of subprojects even though this may be risky in terms of adoption.

New technologies / varieties can be tested first on farmer's plots, demonstrating their value before sharing with local authorities and other interested parties. A more practical approach is Farmer Field Schools at the *raion* (*Jamoat*) level – reproducing actual farm conditions. The linkage is stronger between research (NGO, institute) – demonstrations (farmer's plot with the assistance of FO & *Hukumat*) – and dissemination (demonstration by farmers and Fos). In addition, linking these activities with government programs or priorities may help to some extent encourage *Hukumat* authorities to keep engaged at the end of a project. It should be noted that these types of activities will require international assistance of the type that was planned under CAWMP from IFAD and ICARDA.

The Project would have benefitted from greater marketing expertise (e.g., value chain development, association formation). Some CIG products reaching commercial scale such as fruit, vegetables, honey, etc. require knowledge on effective marketing.

Female participation can be strengthened through additional processes during planning. Women beneficiaries were positively represented in CIGs with 40% of beneficiaries listed as female but the approach from the beneficiaries' point of view appeared at times to be filling 'quotas' than reflecting women's concerns. Taking into account local-cultural circumstances, it may be possible to focus on gender specific credibility grants, gender-oriented participatory planning resulting in a more integrated community action plan and subprojects focusing on women's strengths.

Implementation

The scope and scale of JDC mandates is effective for delivering services to upland, and often more remote, farmers. In CAWMP sub-district level organizations proved to be an effective component of scaling-up strategies for SLM in a challenging physical landscape. In the Project 39 JDC's handled more than 3,800 CIGs and over US\$7.0 mln. in fund transfers. Additionally, participatory processes helped ensure that organizations such as JDCs worked effectively with government management units to deliver technical and financial resources to farmers. Future efforts should maintain a focus on strengthening sub-district level support to farmers with scaling-up strategies requiring investment in institutional arrangements. It will be important to ensure that participatory processes, including financial management mechanisms, are well integrated into SLM programs.

Contracting other organizations (e.g., FOs) requires clarity in procedures and Project objectives – up front. The Project experienced wide variation amongst the FOs in terms of the conditions, level of funding and support. Part of this was explained by the lack of a coherent and consistent mandate that could have been resolved through comprehensive introductory workshops or seminars.

At PIU level, it would be beneficial to have an M&E specialist so as to relieve PMU monitoring efforts. Monitoring at the PCU level was primarily of financial aspects with little attention on analyzing the Project implementation pace, suggesting improvements or monitoring of impact. M&E and financial

specialists tended to be reactive to PMU M&E requirements and not proactive. At the same time, any future M&E efforts also need to take into account the limited capacities and skills available in field locations as well as salary scales for government jobs.

A simpler and clearer operational manual for rural investment preparation would have been more effective. The manual was very comprehensive and relatively clear for professional staff but for villagers, especially the less well-educated, it posed difficulties. The requirements for environmental analysis, the business plan and the design and calculations of rural infrastructure were not well understood at Project start-up. This resulted in JDC and FOs often preparing the proposals for those beneficiaries, leading to delays in preparation and/or grant approval because the information provided by CIGs was incomplete. Future guidelines must accommodate the skill levels of these beneficiaries with clearer and simpler guidelines for environmental analysis and feasibility assessment. Similarly, the proposal format requirements need to be simplified for future operations so that they can be done in time and for the most part prepared by beneficiaries.

While the manual was comprehensive on certain aspects such as approval processes, FOs had considerable flexibility in the participatory rural appraisal (PRA) process leading to the preparation of the Community Action Plans and the choice of investments by villagers. As a result, there was variation in the quality of some proposals and some questionable investment choices. In future, establishing a set of minimum PRA requirements for CAP preparation should help ensure that key issues are analyzed consistently. These would include participatory environmental analyses, training in which was provided to Project partners part-way through the Project.

Training in community driven development procurement procedures would have been beneficial for PMU and PCU staff as well as other Project partners. Such training would have enabled staff to be aware of the flexibility possible in this approach and be more able to provide suitable advice to beneficiaries, e.g., the options available regarding how many local shopping quotes are required for local procurement.

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

(a) Borrower/implementing agencies

Comments on the ICR were received from Government and summarized in the letter provided in Annex 7 – pages 68-69.

Annex 1. Project Costs and Financing

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

Community Agriculture & Watershed Management Project - P077454			
Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Rural Production Investments	10.71	10.69	99.8
Institutional Support and Capacity Building	3.97	4.90	123.4
Project Management and Coordination	3.34	3.72	111.4
Total Baseline Cost	18.01	19.31	
Physical Contingencies	0.00	0.00	
Price Contingencies	1.77	0.00	
Total Project Costs			
PPF	0.00	0.00	
Front-end fee IBRD	0.00	0.00	
Total Financing Required	19.79	19.31	

Community Agriculture & Watershed Management GEF Project - P081159			
Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Rural Production Investments	3.80	3.34	87.9
Institutional Support and Capacity Building	0.60	0.98	163.0
Project Management and Coordination	0.10	0.17	170.0
Total Baseline Cost	4.50	4.49	99.8
Physical Contingencies	0.00	0.00	
Price Contingencies	0.00	0.00	
Total Project Costs			
PPF	0.00	0.00	
Front-end fee IBRD	0.00	0.00	
Total Financing Required	4.50	4.49	99.8

(b) Financing

P077454 - Community Agriculture & Watershed Management Project				
Source of Funds	Type of Financing	Appraisal Estimate (USD millions)	Actual/Latest Estimate ¹⁴ (USD millions)	Percentage of Appraisal
IDA Grant (H0970)		5.80	5.91	101.8
IDA Credit (39280)		5.00	4.93	98.6
Borrower		0.74 ¹⁵	0.58	78.4
Other grants		0.00	0.36 ¹⁶	-
Beneficiary contribution (in-kind)		2.49	3.40 ¹⁷	136.5
Facilitating Organizations (in-kind)		0.00	0.53 ¹⁸	-
Total:		14.03	15.71	112.0

P081159 - Community Agriculture & Watershed Management GEF Project				
Source of Funds	Type of Financing	Appraisal Estimate (USD millions)	Actual/Latest Estimate ¹⁴ (USD millions)	Percentage of Appraisal
Global Environment Facility (GEF)		4.50	4.49	99.8

¹⁴ As of April 30, 2012.

¹⁵ As revised on November 25, 2005 in amendments to the IDA Development Financing Agreement and GEF Grant Agreement - in accordance with country financing parameters.

¹⁶ Separate Bank-executed project on Capacity Building in Geospatial Analysis (US\$160,000.00) and DfID-funded Rural Vulnerability and Resilience Study (US\$200,000.00).

¹⁷ This is the beneficiary contribution, which is mostly “in-kind” but with an estimated value budgeted and monitored in project accounts.

¹⁸ Facilitating Organization (FO) contributions: AKF/MSDSP – US\$100,000.00; UNDP - US\$84,000.00; WHH – US\$345,000.00.

Annex 2. Outputs by Component

Table A2.1 Subproject Implementation

Watershed	A1 Farm Productivity - Number of subprojects	A1 Value (US\$)	A2 Land Resource Management - Number of subprojects	A2 -Value (US\$)	A3 Rural Infrastructure Number of subprojects	A3 - value (US\$)	Total Number	Total US\$	Number of villages
Surkob	98	197,525	222	487,593	84	202,087	404	887,205	47
Zarafshan	915	1,200,257	1,489	2,796,524	336	794,239	2,740	4,791,020	222
Vanj	72	127,230	103	313,819	70	119,028	245	560,077	71
Toirsu	123	264,865	246	658,225	87	249,284	456	1,172,374	62
Total	1,208	1,789,877	2,060	4,256,162	577	1,364,638	3,845	7,410,677	402
Total HH ¹⁹	11,379		32,134		34,299			77,812	

Table A2.2 Component 1- Farm Productivity Investments

Subproject Category	Number of subprojects	Number of Households	Number of Beneficiaries	Quantity of Units/ Units	Total amount, US\$	Grant amount, US\$	Beneficiary contribution, US\$
Repair of Agricultural machinery	33	344	1,523	33 units	66, 279	43,885	22,394
Bee- keeping	159	1,600	9,158	2,584 beehives	414,061	288,584	125,476
Blacksmith shops	34	458	2,418	34 units	101,715	71,059	30,656
Livestock development (purchasing livestock)	510	4,363	23,608	6,433 heads	1,049,681	679,197	370,484
Yak breeding	4	49	352	40 heads	14,758	10,573	4,185
Poultry farming	99	813	4,760	11,324 heads	199,266	136,920	62,346
Greenhouse	54	484	2,545	1,9 ha	134,875	84,427	50,448
Horticulture	64	683	3,311	74 ha	115,258	68,239	47,019
Join use of agricultural machinery and equipment	5	81	385	5 units	15,847	11,440	4,407
Annual crops	12	135	753	15 ha	35,462	18,804	16,658
Melon	5	45	233	15 ha	10,270	6,412	3,858
Plan Nursery	12	105	563	5 ha	24,135	15,922	8,213
Potato production	25	187	1,233	23 ha	51,379	38,950	12,429

¹⁹ The number of benefiting households is reported by type of investment. It should be noted that households may participate in more than one type of investment and therefore the total reflects some double-counting. However, it is clear that more than 43,000 households participated in the subprojects, since there was very little, if any overlap between A1 and A2 recipients.

Subproject Category	Number of subprojects	Number of Households	Number of Beneficiaries	Quantity of Units/ Units	Total amount, US\$	Grant amount, US\$	Beneficiary contribution, US\$
Small enterprises for agri-processing	140	1 413	7 460	47,182 produced units ²⁰	304,191	209,166	95,025
Vet/Vaccination	36	389	2 388		100,722	72,004	28,718
Storage for agricultural production	2	48	281	2 units	8,436	5,861	2,575
Watering place for livestock	5	54	322	43 ha	10,840	7,763	3,077
Wool processing	5	54	313	5 workshop units	13,155	7,946	5,208
Fishery	4	74	373	6 ha	18,887	12,724	6,163
TOTAL:	1,208	11,379	61,979		2,689,217	1,789,877	899,341

Table A2.3 Component 1 – Land Resource Management

Subproject Category	Number of subprojects	Number of Households	Number of Beneficiaries	Quantity of Units/ Units	Total amount, US\$	Grant amount, US\$	Beneficiary contribution, US\$
River Bank protection	22	467	2,963	1,094 ha	90,109	63,303	26,806
Canal rehab and repairing for irrigation	86	4,059	21,294	6,227 ha	431,092	290,106	140,984
Cattle pen building and repairing	30	530	2,706	30 units	92,265	67,791	24,474
Stone remove for horticulture	2	31	236	4 ha	10,157	8,000	2,157
Conversion of slope land and planting trees	79	1,147	5,874	278 ha	221,799	142,699	79,100
Annual crop	145	1,910	10,100	480 ha	386,830	259,528	127,302
Horticulture/Terracing	1,379	18,118	98,743	2,570 ha	3,817,859	2,607,742	1,210,117
Plant Nursery	2	10	48	1 ha	1,647	1,320	327
Pasture improvement	152	3,119	18,555	23,061 ha	646,942	455,856	191,086
Rehab and opening the road to pasture	10	231	1,659	10,410 ha	25,707	20,134	5,573
Potato production	2	25	133	1 ha	5,494	3,805	1,689
Vineyards	62	1,146	6,613	431 ha	243,034	166,281	76,754
Building of small dams for small water reservoirs cattle in pasture	8	127	733	7 048	24,020	18,518	5,502
Woodlots	69	1,084	5,691	80 ha	177,964	136,057	41,907
Planting of Herbs	6	69	329	57 ha	13,622	9,949	3,673
Composting	5	37	175	5 units	3,512	2,260	1,252
Water storage	1	24	169	125	3,778	2,812	966
TOTAL:	2,060	32,134	176,021		6,195,832	4,256,161	1,939,669

²⁰These are items such as jars, etc.

Table A2.4 Component 1 – Rural Infrastructure

Subproject Category	Number of subprojects	Number of Households	Number of Beneficiaries	Quantity of Units/ Units	Total amount, US\$	Grant amount, US\$	Beneficiary contribution, US\$
Drinking water supply	170	11,676	83,517		622,899	448,013	174,886
Biogas	2	62	337	1 unit	8,539	6,484	2,055
Building for biogas system	1	13	70	1 unit	2 572	2 052	520
Rehab and opening the road to pasture	161	9,149	55,019	23,226 ha	468 510	339,543	128,966
Repair of Pump station	7	505	2,496		36 494	22 084	14,410
River Bank protection	10	670	3,432	414 ha	28 554	21 771	6,783
Repair and built of small bridge	56	4,066	23,414	842 meters	194 443	140,305	54,138
Building for SHPS	1	12	59	1 unit	2,646	2,117	529
Rehabilitation of Small Hydro Power Station (SHPS)	24	522	2,852	189 KWt	65,015	39 602	25,413
Repair of transformation	2	35	181	32 units	6,384	5 107	1,277
Canal rehabilitation repair for irrigation	131	7,200	43,922	13 419 ha	461,768	317 135	144,633
Drainage rehabilitation	7	207	1,252	5 km	19,251	14 771	4,480
Use of Solar Energy	5	120	943	8 kWt	5,077	4,026	1,051
TOTAL:	577	34,237	217,494		1,922,151	1,363,010	559,140

Table A2.5 Information on Fruit and Nut trees, Woodlots and Nursery Subprojects

№	District	Number of subprojects	Area, Ha	Number of trees planted	Of which Nut trees
Horticulture					
1	Tajikabad	40	63.5	25,745	569
2	Jirgatal	60	115	43,110	1,110
3	Aini	403	335	100,780	1,400
4	Mastchohi Kuhi	53	481	137,860	1,300
5	Panjakent	640	1,192	455,040	13,600
6	Danghara	164	295	105,900	8,900
7	Vanj	83	162.4	64,880	3,600
Total:		1,443	2,643.9	933,315	30,479
Woodlots					
1	Tojikobad	6	16	118400	

№	District	Number of subprojects	Area, Ha	Number of trees planted	Of which Nut trees
2	Jirgatal	37	26	247,000	
3	Aini	8	8	7,300	
4	Mastchohi Kuhi	0	0	0	
5	Panjakent	4	3	4,300	
6	Danghara	6	6	4,890	
7	Vanj	8	21	20,970	
Total:		69	80	402,860	
Nursery					
1	Tajikobod	0	0	0	
2	Jirgatal	3	2	74,500	
3	Aini	8	2.1	75,000	
4	Mastchohi Kuhi	0	0	0	
5	Panjakent	3	1.5	56,000	
6	Danghara	0	0	0	
7	Vanj	0	0	0	
Total:		14	5.6	205,500	
NOTE: Walnut trees were planted in 4 ha in Jirgital district only, with planting scheme of 6 X 6. Other nut trees are planted on contours, and within gardens.					

Table A2.6 Monitoring of sustainable land management and other environmental impacts

Subprojects categorized by main activities:	Quantity	Amount in US\$	Type of Units	Quantity of Units	Area covered
Repair of agricultural machinery	33	43,885			
Bee-keeping	159	288,584	Bee hives	2,584	
Blacksmith shops	34	71,059			
Livestock development (purchasing livestock)	510	679,197	heads	6,433	
Yak breeding	4	10,573	heads	40	
Poultry farming	99	136,920	heads	11,324	
Greenhouse	54	84,427	ha	2	2
Horticulture	1443	2,675,981	ha	2,644	2,644
Joint use of agricultural machinery and equipment	5	11,440			
Annual crops	157	278,332	ha	495	495
Melon	5	6,412	ha	15	15
Plant nursery	14	17,242	ha	6	6
Potato production	27	42,755	ha	24	24
Small enterprises for agricultural processing	140	209,166			
Veterinary/Vaccination	36	72,004			

Subprojects categorized by main activities:	Quantity	Amount in US\$	Type of Units	Quantity of Units	Area covered
Storage for agricultural production	2	5,861	m2	78	
Watering places for livestock	13	26,281	ha	7,048	7,048
Wool processing	5	7,946			
Fishery	4	12,724	ha	7	7
Drinking water supply	170	450,364	M	67,791	
Biogas	3	8,536			
Rehab and opening the road to pasture	171	359,677	ha	33,636	33,636
Repair of pump stations	7	22,084	ha	444	444
River banks protection	32	85,074	ha	1,508	1,508
Repair and built of small bridge	56	140,305	M	842	4,050
Rehabilitation of small hydropower stations	24	41,719	kBt	189	
Repair of electric transformer	2	5,107			
Canal rehabilitation and repairing for irrigation	217	607,241	M	19,646	1,250
Drainage rehabilitation	7	14,771	Km	5	340
Use of solar energy	5	4,026	kBt	8	
Cattle pen building and repairing	30	67,791	m2	17,885	21,250
Stones removing for horticulture	2	8,000	ha	4	4
Terracing of slopes and planting trees	79	142,699	ha	278	278
Pasture improvement	152	455,135	ha	23,061	23,061
Vineyards	62	166,281	ha	431	431
Woodlots	69	136,057	ha	80	80
Planting of herbs	6	9,949	ha	57	57
Composting	5	2,260			
Building of small dams for small water reservoirs	1	2,812	m3	125	
TOTAL:	3845	7,410,677	0	196,691	96,630

Table A2.7 Number of issued Land User Right Certificates

№	Watershed	Number of Certificates	Area, ha
1	Zarafshan	447	534
2	Surkhob	164	118
3	Toirsu	85	280
4	Vanjob	125	15
Total :		821	947

Project Outcomes

At least 80% of rural production investments are successful according to agreed standards and are being maintained. Field assessments indicate that about eighty-five of ten subprojects can be considered as successful. Reasons for unsuccessful investments include loss of assets to disease, pests and natural events, e.g., loss of animals to floods.

All villages participate in credibility investments.

- All villages participated in credibility investments. However, the timing of implementing these investments could have been better so that they were carried out before subproject implementation. This overlap sometimes led to confusion among beneficiaries about what type of investment they were participating in. Overall the purpose of these investments was achieved; beneficiaries gained confidence in some of the project approaches and also gained experience in the pilots of possible subprojects.

Number of participating households in at least one of the types of rural production investment is at least 50% of total Project area population and being replicated elsewhere.

- Overall more than 50% of the total Project households (>43,500) participated in subprojects. In the case of rural infrastructure, depending on the type of investment entire villages benefited, e.g., drinking water supply. This leads to some overlap in participation by households in land resource management and farm productivity investments as well. Therefore, only the participants in these two types of investment are counted, but numbers for each investment are provided in the tables above.

In communities that are participating in the Project, the proportion of people above poverty level increases from 3% to 30%

- The proportion of people above the poverty level rose to 50% in Project communities. Estimated income (after subtracting costs) for farm productivity and land resource management investment varies from US\$100 to US\$300/HH/year. In addition, the food security effect is significant. CIGs have a practice of sharing surplus produce with vulnerable and less-well off individuals. They also consider such practices contribute to maintaining social cohesion and harmony in villages. Improved livestock management is estimated at adding 5-10% value to the animals due to fattening, improved health. In the case of land resource management investments, the effect on poverty reduction is higher as the CIGs already benefit from intercropping even before the trees bear fruit.

At least 78,000ha covered by land resource management subprojects and other Project activities that directly and successfully address land and ecosystem degradation (see Table A2.6 above).

- To date the total area of lands directly improved by Project beneficiaries through straight application of new and technologically effective approaches is 15,244 hectares.

A considerable portion of lands have also been improved due to secondary direct actions which decrease of the risks of degradation processes. These actions and results include:

Minor roads (access tracks) and trails reconstruction which enables people to use and improve remote lands and also to route herds which in turn promotes the natural restoration of lands along main trails of moving livestock.

Reconstruction and repairing of small bridges has provided similar opportunities for local people. By a preliminary expert estimation, these investments have allowed access to and opportunities to better manage approximately 9,900 ha of agricultural lands (the same assumption as above has been applied to assess the impact of this category of subprojects).

Construction and reconstruction of animal housing has provided opportunities to decrease the impact on winter pastures and lands close to villages and also improved sanitary conditions in villages.

Creation of drinking ponds provided similar and even more widespread secondary benefits as these drinking points reduce the necessity of long drives, especially along lands adjacent to settlements and villages.

Other activities also add to decreasing the risk of land degradation through soil erosion, and improving soil conditions for sustainable land use:

- *bank protection with gabions and tree planting to combat gully erosion,*
- *tree planting along canals and roads to prevent land degradation.*

The total length of tree belts and gabions is more than 213 km. Expert assessment indicates that at least 10,700 ha of fixed slopes and rehabilitated lands have positive impacts. The rate used for this calculation is 50 meters width of the strip along the tree belts and/or gabions, leads to protection of 15 to 200 meters with a tendency for this area to become wider with tree growing.

The *environmental impact* of the Project is even larger due to additional beneficial effects of housing livestock. The construction/reconstruction of 29 animal housing structures serves approximately 45,000 heads of small livestock. On average in Tajikistan one sheep needs from 0.8 to 1.0 ha for sustainable grazing. It means that the construction of these sheepfolds indirectly raises the health of sheep and they need relatively less forage while grazing on an area of more than 40,000 ha. Positive impacts are achieved through the majority of herds being managed (veterinary service, shearing, lambing, etc.) in more remote grazing areas away from settlements. This results in decreased pressure on large areas between villages and remote pastures, which remain free of the high pressure of small cattle and livestock for the summer period. The use of yaks in a few subprojects in Ayni and Jirgital raions instead of sheep and goats also adds to more sustainable management of summer pastures as yaks are less harmful to soils and vegetative cover. Thus, beneficial secondary impacts of subproject actions cover not less than 79,800 ha, which when combined with the area under primary impacts results in not less than 96,000ha covered by land resource management and other project activities.

In addition to area under Project activities, it is necessary to note *other beneficial environmental results*:

- Farmers are using biological methods for plant protection as alternatives to chemical control in at least 210 ha;
- Farmers have established more than 5,300 beehives helping to revitalize an important economic activity as well as a critical ecological process for agricultural productivity and biodiversity conservation;
- Water saving technologies in irrigation in subprojects are estimated to save at least 250 cubic meters a year;

- Power-saving technologies, such as solar heaters and driers and water mills, are estimated to save at least 260 thousand KW/hours per year. Additionally, 25 micro-hydro units have been rehabilitated or established

Intermediate indicator results

Total investments in farm productivity and land resource management have exceeded targets. Beneficiary contributions as noted elsewhere in this report have exceeded the minimum requirement with villagers contributing about 31% of total Project costs. The Project also assisted in the establishment of 2 micro-loan organizations in Zarafshan. Plans for additional MLOs had to be stopped when the national legislation on such organizations changed with an increase in the minimum amount required for establishment. An initial capitalization of \$200,000 was not possible under the Project framework.

More than 570 small-scale rural infrastructure investments have been completed (see Table A2.4). These have helped reduce conflict in villages over resource use, reduced the burden on women and other households members in activities such as water collection. Improved facilities also contributed to reduced local erosion, e.g., drinking water taps. Villagers also formed associations to manage water resources to help ensure long-term operations.

The Project provided small grants to farmer groups to plant over 1.3 million trees on their lands, covering about 3,000 ha. Relevant subprojects include woodlots, horticulture (fruit and nut orchards), terracing and planting of trees, beekeeping, and plant nurseries (see Table A2.5). The Project has also provided support to arrange for secure land use rights to the grant recipients for the land resource management subprojects, in order to ensure an incentive framework for sustainable land management (see Table A2.6).

At least 9,000 rural people received technical training from TAAS, FOs, or other Project partners. Although this target was achieved it should be noted that the research and demonstration activities implemented by the scientific institutions were not as successful as anticipated. The Project worked with the Tajik Academy of Agricultural Sciences, Soil Institute and Crop Husbandry Institute to strengthen their capacities to provide technical services and training to communities. However, most scientists were more familiar with implementing Soviet-style, large-scale demonstration strategies and technical inputs that no longer match the needs of small mountain farmers and current production systems. Anticipated support from IFAD to build JDC/JRC technical capacities did not materialize due to bureaucratic delays, and partnerships with CGIAR institutions, such as ICARDA, which would have provided technical assistance in collaborative and farmer-focused approaches. Ultimately, 30 small demonstration plots were established to assist local farmers in improving their agricultural practices. The overall impact of these demonstration plots and outreach to upland farmers was limited. A more effective mechanism to share innovations was the farmer competition to highlight and reward good practices.

Preservation of live, indigenous plant specimens - several expeditions were made by the Institute of Botany resulting in the identification of over 300 endemic and rare plant species including fruit trees. The Institute also updated the Tajikistan Red Book with their findings.

Annex 3. Economic and Financial Analysis

An incremental cost analysis (ICA) was conducted at appraisal as per GEF requirements. This Annex reviews the ICA against Project implementation results. For details on the benefits, assumptions, baseline and GEF Alternative – refer to Annex 15 in the PAD.

Incremental Cost Analysis

a) ICA at Appraisal

The ICA compared the baseline scenario with the GEF-Alternative scenario. The baseline included: (a) on-going and planned activities undertaken by the Government, in order to improve livelihoods of rural communities while reversing degradation of fragile lands and ecosystems (US\$2.0 million); (b) the associated contribution by beneficiaries in proportion to their level of external support (US\$1.6 million); and (c) activities and resources being financed by IFIs and other donors (US\$10.8 million). The full baseline scenario was estimated to be US\$14.4 million.

Baseline Benefits: The baseline scenario included the following benefits:

- Provide rural infrastructure investments;
- Provide support for farm productivity improvements;
- Provide support for land resource management covering 21,000 ha. The scale of gully and landslide prevention would be smaller;
- Support for scientific research, including support for nurseries, field trials, and line agency capacity building. However there would not be sufficient funding to restore Tajikistan's capacity to preserve specimens of indigenous crop varieties;
- Facilitation and planning support necessary to mobilize communities and ensure the feasibility of rural production investments. Feasibility and eligibility guidelines include communications, group process, organizational and administrative arrangements, contribution requirements, budget limits, and institutional capacity, social, financial, commercial, technical, and environmental considerations. However training and dissemination efforts would be limited.

Table A3.1 Incremental cost matrix as of Project Appraisal and Completion (US\$ million)*

Component	At Appraisal				At Completion			
	Baseline Cost	Incremental Cost		Total	Baseline Cost	Incremental Cost		Total
		GEF grant	Other			GEF grant	Other	
Rural Production Investments	7.20	3.80	0.90	11.90	6.45	3.34	0.9	10.69
Institutional Support and Capacity Building	3.70	0.60	0.00	4.30	3.92	0.98	0.00	4.9
Project Management and Coordination	3.50	0.10	0.00	3.60	3.55	0.17	0.00	3.72
Total	14.40	4.50	0.90	19.80	13.92	4.49	0.90	19.31

Source: PAD, Annex 15.

* Including physical and price contingencies.

The GEF-Alternative scenario, at an incremental cost of US\$19.8 million of which the GEF would finance US\$4.5 million, would support in initiatives in each of the three components:

1. Rural Production Investments (US\$11.9 million; GEF financing - US\$3.8 million). This component comprised support for subprojects in farm productivity improvement, land resource management, and rural infrastructure. Financing from GEF, blended with the IDA financing, would accelerate and expand the land resource management subcomponent. It would address biodiversity conservation and soil protection through vegetative cover restoration to 78,000 ha, which was 57,000 ha above the level that would have been supported by the government on purely national grounds. It would promote biological conservation and moisture retention techniques which made the best use of in-situ water and recharge profiles, increase vegetative cover and generally improved soil structure and water holding capacity. In addition, because of the requirement that beneficiaries contribute at least 20% of the subproject investment costs, GEF financing would leverage an additional US\$0.9 million in beneficiary contributions for land resource management subprojects, which would not have been forthcoming in the absence of the additional GEF financing.

2. Institutional Support and Capacity Building (US\$4.3 million; GEF financing - US\$0.6 million): This component would strengthen scientific institutions, and included the restoration of Tajikistan's capacity to preserve specimens of indigenous crop varieties, in collaboration with the Consultative Group for International Agricultural Research's Central Asia and Caucasus unit in Tashkent. It would strengthen the capacity for seed and seedling production. It would include training for communities, community-based organizations, and interest groups and the Jamoat and Watershed Development Committees. It included initial confidence building mobilization grants for each participating village. It would also include information and experience sharing on a wide variety of institutional, technical, environmental, financial, and management topics, including monitoring and evaluation. Blended GEF financing would enable additional funding for extra support required to increase the extent of land resource management investments, information sharing and awareness-raising on land degradation and biodiversity conservation topics, as well as specimen preservation of indigenous crop varieties.

3. Project Management: (US\$3.6 million; GEF financing - US\$0.1 million). The Project management component would support Project coordination and administration staff, procurement, disbursement, financial management, reporting, monitoring, and evaluation activities, at the national level and for each of the four Project watershed areas. The component would also support the secretariat services to be provided to the national Steering Committee, and support the Watershed Development Committees to enable them to appraise Jamoat proposals for financing from rural communities in a manner consistent with good practice. Blended GEF financing would support increased management of land resource management investments, enabled more extensive evaluation of mountain ecosystem degradation trends, as well as exchange of experience both within the country and with other countries, thus further strengthening replication impact.

b) ICA at Completion

Project results were exceeded in all cases with an incremental cost of US\$5.39 million including the GEF Grant of US\$4.5 million. Thus from a cost-efficiency standpoint the Project can be rated as highly satisfactory.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit
Lending		
Allen Wazny	Sr Financial Management Specialist	ECISOQ
Bekzod Shamsiev	Senior Agriculture Economist	SASDA
Daniel P. Gerber	Rural Development Specialist	ECSS1
Naushad A. Khan	Lead Procurement Specialist	SARPS
Thirumangalam V. Sampath	Consultant	ECSS3
Supervision/ICR		
Alexander Balakov	Procurement Specialist	ECISO2
Aliya Kim	Finance Assistant	ECCKA
Bekzod Shamsiev	Senior Agriculture Economist	SASDA
Bobojon Yatimov	Senior Rural Development Specialist	ECSS1
Craig Meisner	Environmental Economist	ECSS3
Daniel P. Gerber	Rural Development Specialist	ECSS1
Dilshod Karimova	Procurement Analyst	ECISO2
Eustacius N. Betubiza	Country Program Coordinator	AFCCD
Evelin Lehis	Consultant	ECSSD
Fasliddin Rakhimov	Procurement Specialist	ECISO2
German Stanislavovich Kust	Consultant	ECSS3
Jessica Mott	Sr Natural Resources Econ.	ECSS3
John Otieno Ogallo	Sr Financial Management Specialist	ECISO3
Marc Peter Sadler	Senior Agriculture Economist	ARD
Nandita Jain	Consultant	ECSS3
Nigora Safarova	Consultant	ECSSD
Norpulat Daniyarov	Financial Management Specialist	ECISO3
Peter Zara	Junior Professional Associate	ECSSD
Sanjay Sinha	Operations Officer	ECSS2
Shodi Nazarov	Financial Management Analyst	ECISO3
Thirumangalam V. Sampath	Consultant	ECSS3

(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		
FY03	25.79	147.4
FY04	50.89	207.9
Total:	76.68	355.3
Supervision/ICR		
FY05	29.97	92.3
FY06	27.88	102.2
FY07	16.85	108.1
FY08	6.11	39.1
FY09	10.97	81.8
FY10	9.95	99.3
FY11	21.73	148.1
FY12	13.93	84.0
FY13	4.83	5.0
Total:	142.22	760.0

Annex 5. Beneficiary Survey Results

Experiences in subproject implementation

The Project did not have a beneficiary survey however the information below summarizes feedback received during interviews with a representative sample of subprojects.

1. Gafforov Kurbonboy, member of the CIG “Zoti”, Rudaki Jamoat Development Committee of Penjikent rayon, comment on their experience in animal husbandry:

At the initial stage of the Project implementation we actively participated in the training courses on animal husbandry by using modern methods. These training sessions were done by the Institute of Husbandry of Tajik Academy of Sciences, professors of the Agrarian University of Tajikistan employed by the Project. During these sessions we gained theoretical knowledge of animal growth and care. They also taught us how to identify animal illness.

Before the Project we did not have such knowledge, we did not even think of the modern methods - we just drove our cattle out for grazing. Under the Project, we all have received instruction and information materials, we studied them and improved our knowledge on animal husbandry and gained experience.

After the subproject introduction, and after recommendation and support of the Jamoat Development Committee and PCU, we procured in Jillikul rayon of Khatlon oblast 6 cows of the Swiss breed. This breed appeared in Switzerland based on the selection of best breeds adaptable for good fodder and keeping conditions. This breed has 2 sub-breeds – mountain and low plain types. The live weight of this cow averages to 600-650 kg, while oxen may reach up to 1000 kg. Each of such cows in Switzerland produces 4200-4500 kg of milk; the milk fat is up to 3.7%, proteins – 3.4%. This breed of cow is currently developing in the countries of Central Asia. In Vakhsh rayon, as a result of interbreeding local cows of Zebumonad type with the Swiss oxen produced in the new breed – Swissuzebu-monand, which is well adaptable to hot and dry climate of this locality. This breed retained the productivity of the Swiss breed and adaptability to local conditions. For this new type of cattle, we constructed new big sty for the animals to keep and feed in winter time. As was recommended by representative of local Jamoat, we stocked the vitamin-rich fodder for the entire year. Owing to the Project, we now have a vet office. Its specialist frequently visiting us to inspect the cows, and we have an opportunity to timely receive any assistance required. Before that, only to find animal medicine we spent a lot of time. Now we feed animals on schedule, we observe the keeping conditions. In addition, we timely apply vaccination. As a result of the use of modern technologies and sustainability methods the number of cattle heads increased several times. The daily milk yield is 60-70 liters, part of it is consumed by families, and part is sold to neighbors and other people.

We collect manure to prepare compost, after this we use it as organic fertilizer to introduce to soil to increase its productivity. We feed animals, according to recommendations, in the amount of 14-15 fodder units. The gained revenues distributed in equal shares among the CIG members. Because of this, our welfare level is increased, and we will try to work to be even more effective in the future. We receive visitors from the nearby villages, people learn our experience and build there the same small farms and grow cattle by using our technologies.

2. Experience and recommendations in the sphere of horticulture (pears and apples in the mountains)

The orchard subproject in Tajikabad rayon; the group leader Khudoidodov Yusuf.

Considering regional climatic conditions and with Project support, we established a pilot regional garden for tree. Using skills obtained from the training course and new technologies we learned new ways of introducing horticulture. On 10 ha we planted a garden of which 560 quality seedlings were brought from Ministry of Agriculture's nursery in Dushanbe.

The garden yielded rich fruits, melons and gourds from better row-spacing and through the prevention of soil erosion; the development of new methods of farming; and pest control as recommended by scholars and specialists. In the course of subproject implementation we gained rich experience in growing fruit trees in mountain areas. This experience was shared with other fruit tree planters in mountain areas. For example, for apple trees we recommend the following: to ensure fast seedling growth - plant them in areas of 5-6.5m x 2-3m, for moderate growth 4-5m x 2-3m, and for low-growth trees plant them in 3-4m x 2-3m.

Recommended types of trees: *Summer*: Selected Samarkand, Borovika Tashkentia, Plodorodny; *Autumn*: Golden Delicious, Goldspur, Jonored, Johnathan, Golden Winter Parmen; *Winter*: Ranet Semerenko, White Rosemarine, Delicious, Starcrimson, Wellspur and Delicious Red.

Growing pear trees also taught us a lot. We learned that wild-growing varieties are a very important base for grafting and crossing-breeding. The more popular local types of pears and *noshpoti*, keep well and during transport. The Harm type of pears in regular storehouses under the normal temperature can be kept up to 7-8 months. The tree is heat-loving, requires little water, but cannot stand dry weather. In wet soil, with no ground water, it develops well and grows long.

The adaptable early-fruit bearing trees are: Trevi, Swallow, Klapai Aziz, Bee Zhiraf, Autumn Forest, Williams, Bere Ligellia, Bere Bosk, Winter Kure, Harmskaya Pear, Dilafruz, Zhosefina Makhelinsky, Der Seer. A pear tree can be crossed with the quince tree or another pear tree. The crossed hybrids bear good fruit and can sprout well in soil lacking moisture, and still develop. To get bushy pear trees it is necessary to cross them with the small-fruit quince seedling. The pear trees of type Harmsky, Red Nashpoti, Red Williams and Starcrimson crossed with quince is not recommended; since the operated place on the trunk develops weakly, breaks or dries out. Only the Kurero type is advisable for quince crossing. For this, a cut is made on the quince trunk, a groove is made to insert fresh twig of pear tree and one must wrap it tight with fabric. In a short period of time the new twig will inoculate and start growing. By crossing pears this way, it is then necessary to plant them in an interval of 6m x 6m for good results of crossing, or in the interval of 4m x 5m or 4m x 3 for satisfactory crossing results.

Pears are pollinable types of trees and many can turn out barren, so tree planting requires trees nearby with an abundance of pollen.

In mountain areas pear seedlings can, among others, get a "pear honey" disease. This is a persistent disease and requires protection measures.

Our pilot garden was visited by people from other villages; they also learned these modern methods

of horticulture and introduced them in their own work.

1. Farmer Best Practices – examples of competition winners

Pasture management

With Project funds our CIG members improved pasture conditions in 2 ha. We sowed summer cypress on land that was farmed intensively and was highly eroded. Today the shrubs grow very well, and we hope to collect some 200 seeds and increase its sowing area. All year round (any season) the summer cypress is used for fodder. In cases of adequate care - this shrub produces good fodder for 25 years.

Activity benefits:

Sowing summer cypress

Cattle fodder availability, especially for small cattle

Pastures restoration

Good crops of cypress and perspective increase of sowing areas

Vanj rayon, Muminshoev, B., Chairman of the farm “Mukhamad”

To improve pastures a 3km long waterway was built and sowed alfalfa on 14 ha. Climatic conditions allowed for 3 crops per season; with a yield of 14 centers per hectare. The activity of Muminshoev was pasture improvement – but they were also able to stock fodder for winter from high-quality alfalfa. Under local conditions domestic cattle only graze 6 months a year on pastures, and another 6 months should be kept in winter enclosures. The farm members intended to increase alfalfa sowing on pastures in future.

Activity benefits:

Water available for animals

Cost effectiveness on water supply

Pastures restoration which for years were not irrigated, and animals in search for water had to travel big distances and they were losing weight

Modern plant protection methods

Nabotova Makhvash, leader of the farm “Mekhnat”, Jamoat Vanj

Nabotova’s experience in plant protection and cultivation methods is rather interesting and extensive, and neighbors use this experience. On an area of 1.2 ha they planted an orchard of 0.3 ha and the remaining 0.9 ha was used for other cultivation. The Nabotova’s orchard is well managed, and for pest control is using traditional methods (traps) with visible results. In other areas she is growing potatoes, vegetables and other cultures for fodder. Using such a sowing method is good for crop rotation; the harvest yield from trees and other cultures is high. She is using modern technologies to grow cultures.

Activity benefits:

Rational and effective use of plants protection

Land and crop rotation
Receiving 2-3 harvests per season
Marketing studies

Nabotova's area of 0.5 ha have sown various vegetables, used advanced technologies and popular methods of plant protection. During the work - the sowing calendar was observed.

Activity benefits:

Effective use of plants protection methods
Experimenting with growing different agricultures
Organized sowing
Manpower attraction, including women to work in fields

Modern plant protection methods in the Ivan-Tojik Jamoat. Kuhistoni Maschoh district

Koziev Mullonemat, CIG leader from the Ivan-Tojik Jamoat, **Niezov Niezbobo**, leader of "Dobbukov" farm, Jamoat Ivan-Tochik, and **Junusov Junus**, leader of "Revomtuk" farm, Jamoat Ivan-Tochik, were introducing popular plants protection methods and received good results.

Activity benefits:

Staged use of known methods in own business
Observing sowing terms and methods and tree protection
Awareness raising and improved economy through training
Use of modern methods in the mountains

Executive summary from the World Bank

Farmer and Farm Worker Perceptions of Land Reform and Sustainable Agriculture Study

Farmer's decisions are largely shaped by their perception of how exposed they are to different social, economic and environmental impacts. Chief among these are limited management control over farmland, land degradation and low levels or sources of other assets. Previous farmer assistance in this area has focused on building capacity to cope with these factors and create incentives for better land management. The experience from former state-directed economies undergoing transition has shown that what works best is to create 'incentive frameworks' that link land tenure (or security) and asset accumulation along with building farmer's capacity to respond to shocks and stresses. This increases farmer confidence or 'resilience' and can lead to greater entrepreneurial behavior or even the adoption of more environmentally-friendly and sustainable land management practices. Discovering these linkages and the underlying conditions of success still requires further field-evidence – especially in countries under transition.

This is a summary of a report that presents the findings of a recent study in Tajikistan that examined farmer perceptions in Project areas that supported farmland restructuring and sustainable agricultural land management practices among rural households. The findings are expected to be of value to government decision-makers at all levels, civil society organizations, donors and other practitioners interested in practical recommendations for improving current and proposed projects in land reform, agricultural production, sustainable land resource management and related fields.

The study was a collaborative effort of the British Department of International Development (DFID), World Bank and United States Agency for International Development (USAID), and focused primarily on sites where these agencies were supporting projects. This report also draws on an earlier 2007 assessment by the World Bank and USAID that examined knowledge, attitudes and practices toward land restructuring among farmers and farm workers (World Bank and USAID, 2008).

Two thirds of Tajikistan's population is engaged in agriculture that falls into two broad farming systems: upland areas characterized by wheat, potatoes and certain types of horticulture along with large tracts of rain-fed pasture; and lowland areas where irrigated cotton in rotation dominates. Unlike other countries in the Europe and Central Asia region, Tajikistan has not completed the reform process of allocating and registering land use rights for independent farmers so that they are better able to manage their farmland in response to market forces. "Freedom to Farm" without government interference is unevenly practiced in the country. At the same time environmental degradation and unsustainable use of natural resources are important constraints to rural growth, and as a consequence, the country's overall agricultural productivity remains low.

Fieldwork for the study was conducted between March and July 2011, and included a quantitative survey of 1,800 farmers in 18 raions (districts), supplemented by focus groups, in-depth interviews and case studies in eight raions. Due to the modest sample size the study cannot claim to be representative of all farms and farmers in the country, however for the areas covered it does describe the results of interventions from the farmer's viewpoint (or perception). While the knowledge, attitudes, and real and perceived assessments are critical in shaping behavior, it should be noted these may not accurately reflect the actual legal situation or official government data.

Changes and Results in the Process of Farmland Restructuring

Under the World Bank financed Land Registration and Cadastre System Project (LRCSP), there has been significant acceleration in the issuance of land use rights certificates for family farms (25 or fewer shareholders), with 36,911 issued since 2009. This acceleration is an important outcome of the 2009 Government decree. Qualitative results show that farmers acknowledge speedier, more transparent, and no-fee processing of applications compared to the regular Land Committee channels in which farmers might encounter delays, mistakes, and resistance to restructuring by local officials.

The study indicates that rural people have basic knowledge about their rights, but do not fully understand the details of the farmland restructuring process. Both the 2007 and 2011 surveys documented that respondents are aware of having heritable rights and freedom to choose what to plant. However, despite educational efforts by projects, few farmers know about specific differences between farm types, and the steps needed to fully restructure farms.

Key *perceived barriers* to undertaking restructuring include *a lack of machinery, lack of experience managing a farm, lack of access to irrigation water, process costs, and the associated tax and debt burden*, all of which contribute to an overall lack of confidence in farming independently. Those who work on farms yet to be restructured into units of less than 25 members are the most concerned about these barriers. However, *perceived benefits, such as the ability to farm independently and make money are also rated as being very important incentives to restructure.*

Freedom to Farm

The confidence of farmers that they control use of their land has increased significantly since 2007. In 2011, close to half of all respondents strongly agree that farmers can make farming decisions, compared to slightly more than 25% in 2007. Exceptions can be found, however, in cotton production, where only 29% of women strongly agree compared to almost half of men. In collective farms with more than 25 members/workers, farm heads continue to be the decision-makers. Upland farmers are more likely to say they are able to make independent farming decisions than farmers in lowland areas where cotton predominates. Yet areas still remain, such as Tojikobod and Konibodom, where local authorities pressure family farms to grow a fixed percentage of key crops such as potato and cotton.

Gender Issues and Social Tax

Conservative attitudes and practices which are still maintained in some regions of the country limit women's access to information about restructuring and agricultural operations, even though it is widely acknowledged that women comprise the bulk of agricultural labor. In 2011, 25% of women still report having no sources of information on restructuring. Women also are much less likely than men to have either advanced general education or specialized agricultural training.

The long-term rights of women are affected by their omission from certificates. Survey respondents confirmed that women were omitted from certificates in one of every ten cases. Cultural norms and practices attach more importance to including men's names; however, in about 40% of the excluded cases, the social tax was cited as a somewhat important or very important reason.

The social tax of 15 somoni (about \$3) per month also results in other family members being omitted from certificates, e.g., young adults. Other difficulties with the social tax include payments that are due when members are not working, and having to pay twice if someone works on two farms. ***The burden of the social tax and associated transaction costs can be substantial for small, labor-intensive farms.*** Failure to pay the social tax can result in the farmer losing rights to the land.

Rural Organizations

Mechanisms are needed to resolve problems and take advantage of opportunities that extend beyond the farm and family. Examples of problems include access to irrigation and canal maintenance, machinery, and credit. Coordinated efforts necessary for watershed management and other activities to sustain and protect the environment and resources should also be included. A mix of approaches are being used and tested, including Mahalla Councils, *hashars* and other traditional practices, commercial services by private vendors, and non-governmental and donor organization activities. The Community Agriculture and Watershed Management Project (CAWMP), which used farmer common interest groups, is an example of donor-sponsored activities. With the exception of Vanj, where the Aga Khan Foundation/Mountain Societies Development Support Programme has set up village organization activities as a regular practice,

mechanisms to resolve these problems are often either lacking or unable to successfully address issues.

Agricultural Operations, Livelihood Outcomes and Aspects of Vulnerability

Compared to 10-15 years ago, more than half of men and 44% of women say they are better off. When asked about conditions 10-15 years ago, only about 10% of men and women say they are worse off, with the rest saying they are the same. Qualitative results indicate that migrant remittances played a key role in the improved status of many households. Comparing the results between the 2007 and 2011 surveys, farmers indicated a 10% decline in the number of households where farming was the only source of income, and a 10% increase in the number of households where agriculture was no longer a significant source of income.

For farmers in both lowland and upland areas, financial concerns such as access to credit, access to markets, and farm debt are key sources of risk and problems in agriculture and rank in the top five out of 20 problems. Pasture access and rotation also rank in the top five for both regions. In the uplands, the major problem was bad roads, bridges and infrastructure, whereas for lowlands, landslides/mudslides were one of the top five natural resource-related problems. Generally, lowland respondents and those on family farms expressed more concern about environmental issues. Water conservation, integrated pest management and erosion control practices had the lowest adoption rates and levels of knowledge among farmers, with intercropping and windbreaks the highest.

To examine the sensitivity of households as a factor in rural vulnerability, four variables were assessed to indicate the susceptibility of livelihoods to risks. Upland farming could be considered more sensitive overall than lowland farming, due to higher numbers of respondents growing only one crop, and reporting lower income and education levels. However, more lowland farmers reported agriculture as their sole source of income. Farmers on restructured family farms with 25 or fewer members are more likely to have only one crop and limited educational levels, but slightly more income sources. Women tend to have less income and education, but show more crop diversity and income sources.

To examine the potential to adapt to risks and problems, a number of variables were assessed across types of farmers. Results indicate that lowland farm households are more likely to receive migrant remittances and some cash savings. Upland households are more likely to invest in livestock and slightly more likely to adopt sustainable environmental practices. Family farms with 25 or fewer members are more likely to invest in livestock, make investments in farm improvements, and have two or more income sources. **Family farms**, while being more sensitive in some aspects than collective farms to economic and environmental stresses, do **show more potential to adapt**. These farms made **more investments, adopted more environmental management practices** and between 2007 and 2011 **grew a greater diversity of crops**. Women are less likely to report investments in livestock, but slightly more likely to report income from migrant remittances.

The findings indicate that a combination of farmland restructuring and freedom to farm, although necessary for the incentive framework for agriculture and economic transition, is not sufficient. The experience of other transition economies highlights a package of key reforms: (a) creating macroeconomic stability; (b) reforming property rights; (c) hardening budget constraints on

collective and similar farms; and (d) creating institutions that facilitate exchange and develop an environment within which contracts can be enforced and new firms can enter. Family farms need support through this transition in building livelihood assets that help reduce vulnerability.

Recommendations

Strengthen and expand farmland restructuring in order to increase beneficial livelihood outcomes and potential to adapt. In addition to providing donor support, efforts should incorporate as much as possible the Land Registration and Cadastre System for Sustainable Agriculture Project (LRCSP) “good practice” on certificate issuance into other government programs. Although it may not be feasible for the regular government program to adopt the no-fee arrangement or the spatial technology in the short term, ways to address these factors should be considered in the development of the longer-term government strategy. Continued commitment to the issuance of family land use rights certificates is imperative. Future legislation, including proposed amendments to the Land Code, would create conditions for marketable land rights, and those without legal rights are likely to be particularly vulnerable to land grabs, etc.

Although there has been progress in Freedom to Farm, government interference in agriculture needs to be further reduced. Freedom to farm independently and without interference does, however, need to take into account the constraints of the country’s resource base and environmental fragility. Family farms will need continued support and guidance to manage land resources responsibly through efforts similar to those, such as CAWMP, LRCSP and others that supported the environmental management of agriculture and other measures that can reduce sensitivity and increase adaptive capacity.

Improve awareness raising and training activities on farmland restructuring, and give more attention to gender inclusion. Local mass media, seminars, etc. should be used to increase awareness of possibilities and the benefits of acting independently. Efforts should focus on new project areas and test to ensure that people are learning and making informed decisions. The curriculum should include realistic case studies illustrating the consequences of land restructuring in each local area and be gender-inclusive. Education efforts should raise key issues such as land debt and taxes, the social tax and the consequences of not being listed on certificates, and alternative planting strategies. Activities should also focus on building skills to solve common problems rather than just trying to increase knowledge about laws.

The burden and implications of the social tax on farm members, especially on family farms, is a serious issue, and warrant immediate attention and further investigation. Study findings indicate that the current social tax policies appear to discourage the inclusion of women and other adult family members other than the household head from being listed as shareholders on family farm certificates. Qualitative findings indicate that the social tax can even discourage poor households from seeking family farm rights altogether. However, a full analysis of the social tax was beyond the scope of this study. Analysis is now required to explore alternative approaches to social protection. For example, good practice from elsewhere uses policies of income-based taxation rather than a flat rate per head. Any analysis should consider not only issues of social tax policy but also of implementation. In Tajikistan, for example, are there differences between various groups (including family farms versus larger farms versus various forms of non-agricultural enterprises) in social tax collection rates (e.g., enforcement, compliance) and actual access to and flows of social protection benefits.

Strengthen farmer-to-farmer learning about agriculture and access to resources and markets. Informal farmer networks are effective in promoting innovation and replication and help build farmer confidence in operating independently. Conventional methods of communication and learning (e.g., advice through fee-for-service, Jamoat Development Committees) should be complemented with farmer field schools, competitions that highlight good practice, innovation and early initiators, and farmer exchanges.

Support local empowerment through associations and groups. Promoting informal and formal groups, examples of which are already active (e.g., Water User Associations, machinery or pasture user groups) can help farmers access and maintain machinery, infrastructure, pasture, credit and other inputs. Producer associations and groups provide similar opportunities for farmers to access markets and obtain fairer prices for their products.

Annex 6. Stakeholder Workshop Report and Results

Communication and information sharing activities

Several types of publications and directories, magazines, leaflets, informational posters were published and distributed to PCUs, CIGs, JDCs, and WDCs. These materials contained information about environmental protection, rational use of natural resources, better crop production technologies, effective usage of water resources and other information which promote advanced knowledge to improve the capacity of local residents to enhance their income.

№	ITEM	Issued
1	Agriculture Magazine “Zamindor” with different contents and topics	23,300
2	Agriculture Magazine “Kishovarz” with different contents and topics	28,300
3	Information leaflets	6,000
4	Color Informational Posters (different types)	30,000
5	Pamphlet (Information about Project districts and watersheds)	14,000
6	Pamphlet (Information on agricultural pest management)	3,000
7	Books (biogas system, composting, pasture management and livestock breeding, Project achievements, methodological guidelines, etc.)	13,100
8	Leaflets of Project concept and subproject preparation	12,000
9	Methodological recommendation for horticulture in Vanj region	3,000
10	Other publications (Video materials, VCD, CD, calendars, banners, posters, maps, etc.)	17,160
	Total:	149,860

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

Project Context, Development Objectives and Design

1.1.Context at appraisal

Tajikistan has an area over 143,000 km² of which more than 93% are located in mountainous regions. In the period 2000-2003, barely a decade after independence and during a period of stabilisation after the civil war, Tajikistan moved its development efforts from humanitarian aid and reconstruction to more long term development activities. During that period poverty decreased substantially from over 85% to 60% in 2004 with still over 20% of the population considered as **very** poor (1.18\$/day/person). Government of Tajikistan action was guided by the PRSP and the national development strategy which emphasize growth, provision of basic services, supporting the poor and improving governance. Within this context and as a follow-up to the successful farm privatisation project, GOT, World Bank and GEF designed in 2004/2005 a project focussing on both poverty and environment in mountainous regions where 20% of the population lives and where poverty and land degradation are highest.

The Community Agriculture Watershed Management Project (CAWMP) is addressing 2 major challenges in Tajikistan: poverty reduction through agricultural development and income generation, and environmental degradation through integrating sustainable land management practices. Both issues are closely linked, in particular in mountainous areas where inadequate land management practices due to lack of investment and/or knowledge lead to serious environmental degradation such as mudslides, soil erosion, silting of rivers. Still, highlands in Tajikistan have good agricultural and livestock potential if only managed appropriately. In addition, mountainous ecosystems, some of which are under threat like pastures and forests, constitute a unique pool of genetic diversity of wild-growing plants which is worth conserving. In Tajikistan the breakdown of the Soviet agricultural system after 1990 and the production decline pointed to the need for land reform. The first legal acts on land reform and farm restructuring in Tajikistan were issued in 1992, but land reform began actively only in 1995, with a presidential decree allocating additional land to household plots – always a highly productive sector in all of the former Soviet Union. In the uplands, farmers lacked capital to exploit the productive potential of their lands.

At the time of Project design, in rural areas a lot of development aid was focussed on humanitarian responses rather than activities to support rural agricultural production. This Project was a departure with its focus on agricultural production and sustainable natural resource management plus its community driven decision-making on the types of investments to be made by villagers.

Table 1: Administrative Units, Population, Number of Households and Types of Farm in the Four Watersheds

Watershed	Districts	Number of Jamoats	Number of villages	Rural population (‘000)	Number of rural households	Number of dehkan and cooperatives farms	Number of kolkhozes and sovkhozes	Number of Jamoats covered by Project	Number of Villages covered by Project
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Surkhob	Darband (30%)	2	26	16.0	2,133	11	5	0	0
	Jirgatal	9	49	51.6	10,072	143	12	5	24
	Rasht	12	117	80.6	12,515	263	4	0	0
	Tajikobod	4	43	32.0	5,107	197	11	3	23
Vanj	Vanj	6	57	28.3	2,855	19	2	6	71
Zarafshan	Ayni	8	62	77.4	15,411	31	3	7	62
	Matcho	2	30	12.0	2,628	14	12	2	51
	Panjakent	14	134	170.3	34,048	59	13	10	109
Toirsu	Dangara	8	75	81.7	11,059	120	10	6	62
Total :	9	64	593	549.9	93,002	857	72	39	402

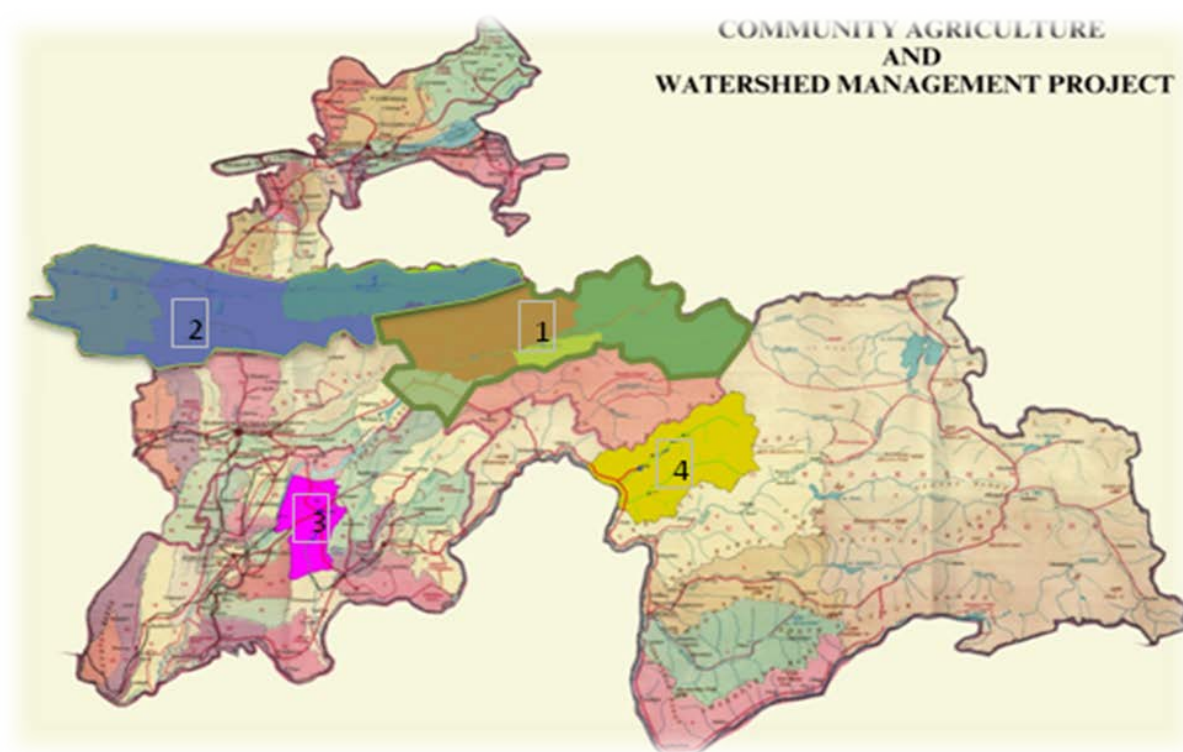


Figure 1. Project Sites (1. Surkhob; 2. Zarafshan, 3. Dangara, 4. Vanj)

1.2. Project Development

Objectives (PDO) and Outcomes

The Project objectives are twofold, reflecting WB and GEF contributions:

- Build the productive assets of rural communities in selected mountain watersheds, in ways that sustainably increase productivity and curtail degradation of fragile lands and ecosystems.
- GEF Objective: Protect globally important ecosystems by mainstreaming sustainable land use and biodiversity conservation considerations within agriculture and associated rural development decisions, providing replicable models for comparable areas throughout the country.

At the time of Project Appraisal, the performance indicators for the Project outcomes were:

At outcome level:

- At least eighty percent of rural production investments are successful according to agreed economic, financial, social, and environmental standards, and are being sustained;
- Number of participating households in at least one of the types of rural production investment is at least 50% of total Project area population and being replicated elsewhere;
- In communities that are participating in the Project, proportion of people above poverty level increased from 3% to 30%;
- Negative trends of land and mountain ecosystem degradation trends halted in Project area Jamoats.

At intermediate results level:

- The total cumulative investment in agriculture production among Project participants (from initial grant, local contributions, and reinvestment) exceeds US\$3.8 million, i.e. more than the projection of Project-financed grants and capital infusions (implying high participation, desirable social and environmental impacts, commercial success, use and repayment of revolving funds);
- Land management investments cover 78,000 ha and benefit very poor at least in proportion to their numbers in a community;
- Number of improved public facilities, disaggregated by type of investment (e.g., village drinking water, roads and electricity);
- 47 JDCs overseeing rural production investments;
- 40% of farm production and land management investments apply improved technologies, and receive good access to necessary inputs and knowledge;
- Number of indigenous crop varieties from Project area preserved as live specimens;
- Satisfactory Project administration as indicated by Bank supervision ratings and Project's public reputation for integrity.

At the time of Project appraisal, these objectives and targets were considered relevant to conditions in Tajikistan as mentioned in the previous section. However, achieving these targets would be dependent on capacities among project management and partners since the Project design was significantly different to previous projects implemented in Tajikistan.

1.3.Adjustments in Project Outcomes and Intermediate Results

By the time of and during the Mid-Term Review in May 2008, the following adjustments were made.

Outcomes

a) *Proportion of people above poverty level participating in the Project:* The means of verification for this outcome indicator was changed given that the baseline assessment of poverty levels in the Project sites was unable to provide primary data of adequate quality. This outcome was measured through analyzing qualitative data gathered from sample subproject reviews during project assessments;

b) *Halting of negative trends of land and mountain ecosystem degradation in Project Jamoats:* This outcome indicator related to land degradation was revised, since the original indicator, an aggregate spatial assessment of land degradation trends, could not easily capture the impacts of the small-scale Project-financed subprojects. A replacement indicator instead measured the number of hectares positively affected by practices, which contributed to sustainable land management. In 2009 monitoring formats were developed for subprojects that have served as the basis for assessing sustainable land management benefits.

Intermediate Results

c) *Credibility investments:* An outcome indicator was added to measure participation in credibility investments since these served important functions of building interest in the Project and awareness of new concepts such as natural resource management. This indicator also provided useful information for the initial period of Project implementation, when other results could not yet be measured;

d) *Percentage of Project-financed investments having access to and applying improved technologies:* This result indicator for the component on technical dissemination was replaced with the number of persons trained, which was more practical and easier to measure than adoption rates;

e) *Number of Jamoats:* At inception, the Project planned to cover 47 Jamoats, but by Year 2 it was clear that this target needed to be reduced. Beginning with the first FO contract in 2005, it was evident that the unit costs per Jamoat and village for facilitation assistance, even with co-financing from the FOs, had been significantly underestimated during Project design. Experience also showed that it was necessary to provide additional resources to support JDC/JRC establishment and operations and ensure that they could play the critical facilitation and financial roles envisaged in the Project. Corrections also needed to be made to the base number of households in the Project Jamoats since these had also changed since appraisal. At the MTR, the following adjustments were therefore made based on more accurate data and available resources:

- The Project will cover 9 raions containing 39 Jamoats and 402 villages; and
- The base number of households would be 57,375 of which at least 50% would be Project beneficiaries.

f) *Bank supervision ratings:* A small modification was made in the indicator for Project management to a more logical measure based on implementation timeliness rather than Bank supervision ratings.

g) *Project reputation for integrity:* This indicator was dropped since there was inadequate in-country capacity to conduct and analyze the necessary surveys. The Project's implementation and

fiduciary arrangement shad the intended effects of lessening the opportunity for inappropriate capture of project resources and increasing transparency. Such measures included public disclosure of subproject costs, community consensus on investment choices and direct transfers of funds to Jamoats.

h) New gender indicator added at the time of Project restructuring in April 2011.

Table 2. Summary of modifications to the Results Framework Indicators at the time of the MTR, May 2008

Original Indicator	Revised Indicator	Explanation
<i>Did not exist</i>	Cumulative number of villages which have participated in credibility investments	Useful, especially during initial implementation when other results not yet achieved.
Negative trends of land and mountain ecosystem degradation halted in Project Jamoats.	Areas in ha covered by land resource management subprojects and other project activities that directly and successfully address land and mountain ecosystem degradation. ²¹	Original indicator will not be able to measure impacts due to problems of scale.
Area in ha covered by land resource management subprojects and benefiting very poor at least in proportion to their numbers in a community.	Total value in US\$ of land resource management subprojects designed and funded.	Avoid duplication with revised outcome indicator above.
Project participants have access to and adopt improved agricultural technologies.	Cumulative number of rural people who have received technical training from TAAS, FOs, or other project partners.	Original indicator not feasible to measure.
Bank supervision ratings and reputation	Project management ensures project implementation timeliness.	Original indicator not practical because of inadequate capacity to

²¹ Confirmation that land resource management subprojects and US\$ value of other project expenditures (e.g., farm productivity subprojects, rural infrastructure subprojects, specific training programs, specific consultancies, etc.), in concept and then in implementation, include at least one of the following results on fragile lands:

- Prevent or reduce soil erosion by water or wind
- Increase vegetative cover through perennial crops and pasture
- Provide soil and moisture conservation
- Improve soil quality
- Improve water use efficiency
- Increase sustainable fodder or wood supply
- Increase sustainable renewable energy supply
- Increase integrated pest management
- Indigenous plant preservation

Original Indicator	Revised Indicator	Explanation
for integrity as perceived in public opinion surveys.		conduct surveys, and emphasis on integrity addressed through other mechanisms.
<i>Did not exist.</i>	Number of Project beneficiaries.	Added by World Bank as core indicator at the time Project Restructuring
<i>Did not exist.</i>	Number of female beneficiaries.	Added by World Bank as core indicator at the time of Project restructuring

At the time of Project completion the objectives and outcome indicators are still considered to be relevant. The GOT continues to recognize the importance of addressing land degradation (see reference to UN Assembly September 2011) in the country. Project objectives are relevant to current GOT programmes in food security, poverty reduction, horticulture development, sustainable pasture management and adaptation to climate change. Emerging challenges to the objectives including employment generation include market development, the need to continue building the rural knowledge base and advisory services to support production, processing and land management.

1.4. Project Components

The Project was funded through a GEF grant, IDA credit and grant, GOT counterpart financing and beneficiary contributions investments estimated costing 19.8M\$ at PAD stage. At the time of the MTR, this figure was revised to 18.77M\$ that took into account exchange rate changes, as well as changes in GOT counterpart financing levels and estimates of co-financing by facilitation organisations.

1.4.1. Funding sources and disbursement/expenditure (‘000 USD)

№	Funding sources (Credit (s), Grant(s), Government co financing, beneficiary contribution etc.)	No and Date of Credit (Grant) Agreements	Total Sum	Actual disbursement	Actual expenditure	Balance	% of expenditure
1	IDA Credit №3928-TJ	3928-TJ 25.11.04	5,000,00	5 171,45	4 947,14	224,31	99%
2	Government of Tajikistan contribution	3928-TJ 25.11.04	2,000,00	591,25	590,45	0,80	30%
3	IDA Grant; №H097-TJ	H097-TJ 25.11.04	5,800,00	5 942,18	5 896,36	45,82	102%
4	GEF Grant №053572-TJ	053572-TJ 25.11.04	4,500,00	4 499,90	4 498,73	1,17	100%
5	Beneficiary contribution		2,400,00	-	3 400,00	-	
	Total:		19,700,000	16 204,780	19 332,680	272,10	98%

Component 1: Rural production investments

These investments were to benefit the population through access to small grants

- A. ***Farm productivity improvement:*** individuals or groups of households invested in specific activities providing income on a short term basis (within 1-3 years). These included provision of inputs for cropping systems, horticulture, livestock, processing, leasing, etc.
- B. ***Land Resource Management (environment):*** this subcomponent enabled local people to adopt more sustainable use of fragile lands and provided Right of Use of Land Certificates after three years of maintenance, subject to continued good land use (this provision was changed during Project implementation to issuance of certificates according to the schedule of issuances in the Land Registration and Cadastral Survey Project for the CAWMP locations). Most activities combined long term income-generating investments (3-4 years and on) in order to enhance sustainable land use. Activities included horticulture, woodlots, pasture management, soil and water conservation measures, etc.
- C. ***Rural Infrastructure:*** these investments rehabilitated small-scale rural infrastructure intended to benefit community groups and complement the above subcomponents. Activities included drinking water, small irrigation, minor transportation rehabilitation, small power generation, etc.

Beneficiaries organized as Common Interest Groups (CIGs) accessed grant money by providing a 20% minimum contribution for the total subproject costs. Their proposals had to follow fixed budgets based on village population as long as any household does not exceed US\$290 grant money while group members applying for a rural infrastructure grant cannot exceed US\$50/HH.

Component 2: Institutional Support and Capacity Building

- A. ***Research and Demonstration:*** scientific institutions and line ministries provided technical services including training to communities in the following areas: seed and seedling production, livestock breeding and animal health and husbandry improvements, and market and enterprise analysis and development. Activities were financed to support the preservation of indigenous crop and other specimens.
- B. ***Community Mobilization and Subproject Preparation:*** including training and facilitation for *Jamoat* Development Committees (JDCs) as well as households and common interest groups with support of facilitating organizations. It also included support for small confidence building mobilization grants (\$1,000) for each village.

Component 3: Project Management

This component supported all functions related to project management (project coordination, procurement, disbursement, financial management, reporting, monitoring, and evaluation) and supports the secretariat services provided to the State Level Steering Committee (SLSC) and the Watershed Development Committees (WDCs) which are to approve the grants.

There were no significant changes made to the Project components. Some changes were made to strengthen Project activities in sustainable rangeland management through additional technical assistance including a dedicated PMU specialist, and a decreased emphasis on rural infrastructure. Indicators and the Project cost estimates were adjusted during the Mid-term Review in 2008.

1.5. Project Implementation

The Project followed the concept of community-linked development, a participatory process which involves communities in identifying their needs, and provides for their direct involvement in resource allocation, decision making, implementation, and monitoring at the local level, with Jamoat Development Committees (JDCs) playing a key role. Villages allocated resources within fixed budget constraints among the subprojects sponsored by common interest groups or households, through a process a participatory analysis facilitated by Project-contracted NGOs (such as Aga Khan Foundation, WeltHungerHilfe, FAO and UNDP which were NGOs and agencies already active in Tajikistan) and JDC representatives. The subproject investments in any one village would take place over a three year period. Specialists from Government line agencies and NGOs assisted common interest groups in developing feasible and eligible proposals. Guidelines include communications, group process, organizational and administrative arrangements, contribution requirements, budget limits, and institutional capacity, social, financial, commercial, technical, and environmental considerations. After the review and approval process, JDCs provide resources directly to the common interest groups undertaking subprojects. The common interest groups had ownership of completed installations, and responsibility for their subsequent operation and maintenance. To avoid misuse of grants or misunderstandings of Project's objectives, each FO had to present at the start of their contract, a limited number of subprojects directly to PMU (and the donor) whatever the amount for approval, after which the Project's procedure could be followed: this was an efficient procedure and enabled PMU to rectify FO and JDC support to CIG whenever necessary in terms of subprojects funding criteria.

Table 3 below summarizes the various partners and key stakeholders in the Project, their function and plus assessments of their roles in Project implementation.

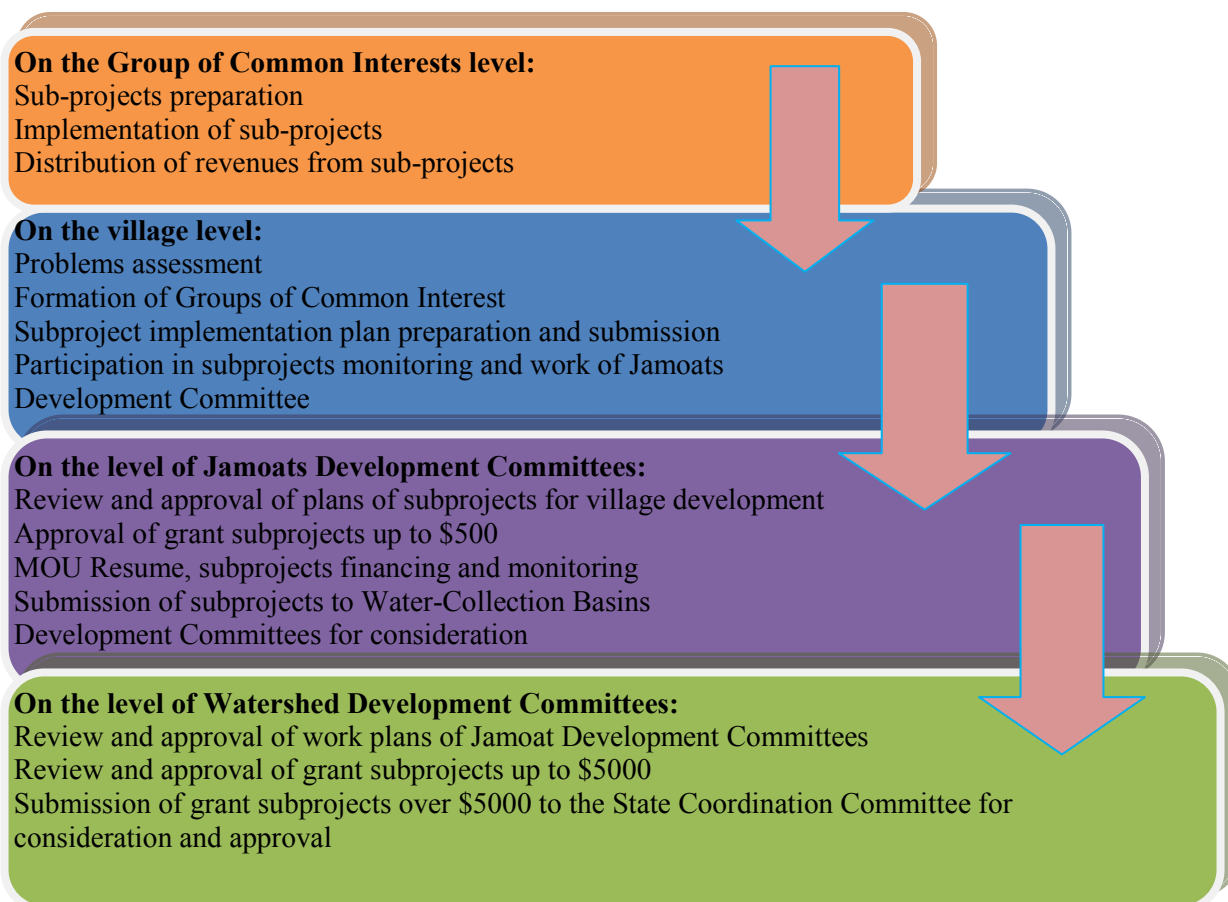
Table 3. Project Partners and Stakeholders –Roles and Assessment

Project Stakeholders	Key Roles	Positive	Negative
GOT	Provide conditions for project operation, counterpart financing	<i>See Borrower performance</i>	
PMU	Project administration, coordination, M&E, technical support		
PCUs	Field coordination and support	Field presence, local knowledge, gained skills through the project	Limited initial skills and understanding for project. Weak on M&E, esp. project outcomes

Project Stakeholders	Key Roles	Positive	Negative
FOs	Facilitation in community mobilization, capacity building, and technical support to JDCs and CIGs	Experienced and staff relevant to project sites. Took initiative to exchange experiences across project sites, e.g., FAO	Early FOs did not fully understand project design and role of GOT and WB. Projected themselves as implementers and financing bodies.
Scientific Institutes	Research, demonstration of technologies, dissemination to farmers	Some effective results shown in live specimen conservation, soil rehabilitation and IPM strategies	Limited experience in demand-driven, small-scale upland agriculture requirements
JDCs	Fund transfer to CIG, CIG support, rural investment review and approval, M&E, WDC members	Worked effectively to transfer funds to CIGs, Local presence and knowledge was effective and valuable. Skill levels increased.	Weak monitoring of subprojects – lacked facilities, e.g., vehicles and skills
CIGs	Design and implementation of investments	Exceeded minimum beneficiary contribution requirements, capable of implementing subprojects	Variable skill levels and knowledge led difficulties in design and M&E of subprojects
Line Ministries (inc. regions)	Institutional support, technical advice, review of investments		
Raion Authorities	Review of investments, technical support, WDC members		
WDCs	Review and approval of investments		Did not perform uniformly
SLSC	Review and approval of investments over \$5000		Functions conducted by other bodies, few proposals over USD 5,000
Local NGOs	Technical support		

The overall process and relationships between key players is outlined in the figure below.

Figure 2. Preparation and Implementation of Rural Production Investments



Given little prior experience of working together and the project's innovative and complex processes and mechanisms, e.g., household and village budget limits and the community-driven approach, these partnerships have been effective in community mobilization, in designing, supporting, appraising and monitoring subprojects and in providing related training and technical assistance. The partnerships with international organizations (AKF/MSDSP, FAO, UNDP and WHH) generated both benefits and challenges for the project; while different approaches and competencies have resulted in some opportunities to learn from a range of good practices, somewhat independent watershed approaches did initially result in inconsistent (and sometimes incorrect) interpretations of project design and procedures.

1.6. Monitoring and Evaluation (M&E) Design and Implementation

M&E design: A monitoring and evaluation manual was prepared for the project in 2004 and revised in 2008.

M&E implementation: Most monitoring activities were focused on results: it culminated in the design of a comprehensive project database for all project grants after swaps of various databases designs produced by both PMU and each FO.

The PAD suggested the contracting of an M&E and financial specialist at JDC level. These functions were separated: financial monitoring of results was effectively carried out by the financial and M&E JDC specialist.

In the context of the overall monitoring and evaluation approach, assessing and reporting on outputs has, as expected, been easier and more effective than similar activities regarding outcomes. A number of the activities planned to assist in evaluating outcomes have not been possible or practical, e.g., analysis of satellite imagery due to lack of in-country capacity while for others such as baseline socio-economic surveys in-country capacities were not fully developed for project purposes. The Results Framework has been revised to reflect implementation experience. On the other hand, the planned monitoring of outputs using reports, simple databases and field visits has been effective and more suited to Tajik conditions where communications can be difficult, IT facilities were limited and project sites are scattered and remote. Monthly reporting by all major project partners allowed project management to aggregate data and findings.

M&E was carried out by all stakeholders with site-specific approaches. By project's end some efforts had been made in order provide continued monitoring; in particular, the relationship between the project partners and *hukumat* authorities could have been strengthened both for on-going support and monitoring. FO follow-up has resulted in additional support through new interventions— replication of similar types of subprojects or entire approach with grants (e.g., Aga Khan in Vanj) and/or additional support for increased impact (e.g., WHH in Zarafshon).

Two phases of assessing environmental impacts of rural investments have been undertaken that provided possibilities to assess primary and secondary environmental benefits (refer to table with details of environmental impacts in Annex 2).

2. Project Outcomes and Results

Table 4. Project Results Framework

Development Objective: to build the productive assets of rural communities in selected mountain watersheds, in ways that sustainably increase productivity and curtail degradation of fragile lands and ecosystems.			
Global Environment Objective: Protect globally important ecosystems by mainstreaming sustainable land use and biodiversity conservation considerations within agriculture and associated rural investment decisions, providing replicable models for comparable areas throughout the country.			
Outcome Indicator	Pre Project Baseline	Actual Apr 2012	Final Target
% of rural production investments are successful according to agreed standards ²² and are being sustained.	NA	85%	80%
Cumulative number of villages which have participated in credibility investments	0	402	402

²² Taking into account economic, financial, social, and environment parameters, and weighted by value of investment.

Cumulative number of households which have participated in some part of the rural production component	0	43,513 ²³	32,000
Proportion of population above poverty level in villages that are participating in project	3%	50%	30%
Area in ha covered by land resource management subprojects and other project activities that directly and successfully address land and ecosystem degradation ²⁴ .	0	96,600 ²⁵	78,000
Number of project beneficiaries		238,000	192,300
Number of female beneficiaries		91,304	88,000

Intermediate Indicator for Each Component	Pre Project Baseline	Actual Apr 2012	Final Target
IA : Total value in US\$ m of farm production investments (regardless of financing source) to date in villages where project is operational	0	\$3.85 million ²⁶	\$3.8 million
IB : Total value in US\$ m of land resource management subprojects designed and funded. ²⁷	0	\$6.20 million	\$5.39 million ²⁸
IC: Number of improved public facilities, disaggregated by type of investment (village drinking water, roads, bridges, and electricity).	0	422 ²⁹	* ³⁰

²³ This indicator now reported by number of households participating in each type of rural investment. Since households participate in more than one type of investment, a breakdown by investment provides more useful assessment of project impacts

²⁴ Confirmation that land resource management subprojects and US\$ value of other project expenditures (e.g., farm productivity subprojects, rural infrastructure subprojects, specific training programs, specific consultancies, etc.), in concept and then in implementation, include at least one of the following results on fragile lands:

- Prevent or reduce soil erosion
- Increase vegetative cover through perennial crops and pasture
- Provide soil and moisture conservation
- Improve soil quality
- Improve water use efficiency
- Increase sustainable fodder or wood supply
- Increase sustainable renewable energy supply
- Increase integrated pest management

²⁵ Updated estimate based on August 2010 review of rural production investments

²⁶ Funds in JRC/JDC accounts, beneficiary contribution, revolving funds, and reinvestments

²⁷ Funds in JRC/JDC accounts and beneficiary contribution

²⁸ Based on estimated project costs as revised at MTR

²⁹ Completed and under implementation

³⁰ *Indicates target not appropriate but numbers were monitored

Intermediate Indicator for Each Component	Pre Project Baseline	Actual Apr 2012	Final Target
IIA: Cumulative number of rural people who have received technical training from TAAS, FOs, or other project partners	0	9175	8,000
Number of varieties preserved as live specimens	0	300	* ³¹
IIB: Number of JDCs that have been established and are overseeing implementation of credibility and rural production subprojects	NA	39	39
III: Project management ensures project implementation timeliness	NA	Completion on schedule	On schedule or prior delays being overcome and completion on schedule possible

Project outcomes and outputs by component are detailed in Annex 2.

Communication and Information Sharing activities

See Annex 6.

3. Financial Management and Procurement

3.1. Overview:

There was a one-year delay in project start-up. Facilitation support proved to be difficult to procure. UNDP was the first FO contracted but there was a misunderstanding about the project concept with the result that implementation was delayed as operational guidelines were clarified and agreed. UNDP was also the only FO to transfer funds to JDCs rather than the PMU. This was not an ideal arrangement and subsequent transfers in other project sites were made by the PMU. Thereafter the phased introduction of watersheds proceeded as mostly as planned and disbursement rates to subprojects were at the time of the completion of this component were at target values.

The primary reasons for the initial delays included inexperience within the PMU and in the WB in contracting facilitating organizations and within the PMU unfamiliarity with the project's concepts and implementation arrangements. The PMU was not familiar with managing output-based contracts with FOs and faced challenges in reconciling these arrangements with Tajikistan's accounting methods, as well as with direct fund-flow mechanisms to Jamoats. But the growth in PMU capacity to manage these aspects of the project has been a significant achievement. Arrangements were worked out with FOs on financial reporting that would meet GOT requirements. The project's fund flow arrangements required building capacity especially for the

³¹ Indicates target not appropriate but numbers were monitored

PMU and JDCs who played critical roles in financial management. Initially, it was difficult to find technical assistance in this area and this delayed implementation, but once this was found, financial management staff and systems were put in place to disburse and report on subproject funds in a timely and transparent manner. A fiduciary field visit conducted in May 2008 which checked financial management and procurement on a random sample at the local level in Vanj, Toirsu and Surkhob found no problems in fund flow to beneficiaries and JDCs, nor in local procurement.

Regular annual national and international audits raised no significant concerns. Similarly a review of the project by a Commission of the Presidential Administration of Tajikistan conducted in early 2008 raised no major issues regarding project management. A detailed review of financial management arrangements of the project was carried out by the World Bank team under Tajikistan Portfolio Fiduciary Review during April 28- May 10, 2008. No major concerns were raised and all issues were addressed.

3.2. Some Key Challenges:

Requiring the use of financial management software (1C) meant that frequent technical support was needed in order to meet Bank reporting requirements. The project only finally met Bank requirements at the end of the project.

Difficulties were experienced in fund transfer from the PMU for JDC operations. Payment of the JDCs through the PCUs was not efficient and it would have been better to have deposited funds directly into JDC bank accounts.

3.3. Beneficiary contributions:

At the time of completion of Component 1 implementation, it was estimated that beneficiary co-financing had on an average exceeded the minimum requirement of 20% of the total value of the rural production investment to 31% (i.e., 45% match for project financing). In numerous cases, beneficiaries absorbed increases in costs that have occurred since subproject preparation due in some part to delays in transferring funds to JDCs/JRCs as well inflation. Although almost all of this contribution is usually as labor, materials, etc., the level of contribution demonstrates strong ownership and commitment, and thus a critical contribution to subproject sustainability. As of September 2011, the value of beneficiary contributions was approximately US\$3.4 m.

4. Assessment of Bank and Borrower Performance

4.1. Bank Performance

Bank performance in Ensuring Quality at Entry:

At the time of project start-up, the roles of the various project partners was not fully explained and understood, especially by those at the local level. The Operational Manual for Community Mobilization and Rural Production Investments was complicated and not very clear including the guidelines for subproject proposal preparation. This lack of clearness created difficulties, particularly at the local level. Initially there was a lack of experience in the Bank and the PMU on how to contract the FOs and the type of contract proposed – output based – was one that the PMU had not previously managed. Project partners did not also fully understand the concept of the GEF alternative.

Quality of Supervision:

In comparison with other donors, the supervision of the WB has been effective. For example, efforts were made to explain and clarify GEF alternative and FO roles and contracts. Generally, within the overall framework of the project, and in comparison with other donors the WB was flexible in assisting project partners to implement activities given the constraints and possible opportunities, e.g., reducing the number of subprojects for prior approval from 10 to 3 per investment category thus saving time, adjusting staffing in PMU to accommodate important issues such as rangeland management, market development. While the number of missions per year was adequate, the timing could have been better coordinated with peak periods of rural activities in project sites. Overall the working relationship with the Bank team was collegial.

4.2. Borrower Performance

Government performance:

The GOT provided the necessary facilities for project management and coordination, including field facilities. The estimated counterpart funding at completion is US\$591,000. Government bodies continue to pay attention to the project and its outcomes. The Ministry of Agriculture, State Land Committee, State Committee on Environmental Protection and State Committee on Investments provided regular assistance to support the implementation of project activities. The State Land Committee provided assistance to the project for the issuance of Land Use Rights certificates for project beneficiaries. The project also collaborated closely with the Land Registration and Cadastral Survey Project on this issue as well.

5. CAWMP Actions to Help Ensure Sustainability and Replicability of Project Outcomes

5.1. Sustainability of rural production investments

The overall concept and process of community-driven development contributes to the sustainability of rural investments. Villagers made decisions on what investments to implement, who should benefit and the distribution of financial resources across the three categories thus building ownership and contributing to the sustainability of these activities. Villagers were also responsible for financial management and procurement for investments. Proposals for these investments required villages to consider economic, environmental and social/institutional sustainability, e.g., cash flows and cost recovery arrangements for 3-10 years depending on the type of investment, environmental conservation and mitigation measures, and establishing organizations such as water user associations to support long-term operations. Furthermore, the requirement of beneficiary contributions (including cash contributions for rural infrastructure) helped build ownership and also contribute to the sustainability of these investments.

Other key actions that contributed to sustainability are given in section 2.5 of the PAD's main text.

6. Additional Activities

When the project was extended in spring of 2011 until April 2012 it allowed for additional activities in project pilot districts. Project activities included the following areas: "Creation of

gravity irrigation in small watersheds”, “Sustainable pasture management at the Jamoat level” and “Assistance in market development and fruit processing”:

6.1. “Creation of gravity irrigation in small watersheds”.

The overall objective of this component was to assist in the implementation of initiatives related to water resources management in areas where gravity irrigation is used; as well as farmers’ awareness raising living in the upper and lower reaches of rivers; rational use of water resources and operation of water systems. Project activities were carried out in the Mogien watershed in the Zarafshan valley in four Jamoats of Panjakent district. Seven Water User Associations (WUAs) were covered by project activities as well as other water and land users living upstream of the river. To achieve these objectives the following was carried out: (a) identification of effective applications of perspective water saving technologies on the ground; conducting training and workshops; study tours based on the examples of the best local achievement with the involvement of trainers among farmers; and (b) organizing and conducting tenders for small works of advanced water-saving technologies between water users. As a result of these activities recommendations were developed on the establishment of a multilateral cooperation between the WUAs and other water users in small watersheds, including the evaluation of existing and potential opportunities, risks and conflicts, standard diagnostic methods, dissemination of positive practices of water and soil conservation technologies with a description of typical efficient water saving technologies. A model project implemented in small watershed of Mogien river of Panjakent district achieved the following results:

- Recommendations and offers were described on improving the relationship between water users of the upper and lower reaches of Mogien River with regard to use and water resources management;
-
- Activity water users associations gained the necessary additional knowledge in the field of water saving technologies and rational use of land resources;
-
- Through tendering support was rendered to the best farmers and attention was paid to the following key aspects of water saving techniques: effective use of innovative and traditional water saving technologies, economic efficiency through water saving, the increase of the crop yield and efficient use of water resources;
-
- Environmental aspects of effective regulation of water supply were identified in small watersheds along with their associated economic efficiency.
-

6.2. “Sustainable pasture management at the level of Jamoat”.

The overall objective of this activity was to assist in the development of a pasture management plan for pilot Jamoats. For this purpose, Dar-Dar Jamoat was selected, which is located in Aini district in the Zarafshan Valley. Despite the fact that the project always focused on the importance of grazing issues in Tajikistan, active work on pasture issues only started in the second half of the project period. The project held a series of interventions to stimulate offers for organizing pasture subprojects; the study of mountain pastures and their management system; training of rural residents in rational methods of pasture use; and breeding and maintaining livestock. To achieve these goals, circumstances and the experience gained by the project were taken into account during

model project organization on integrated pasture management in Dar-Dar Jamoat (Ayni district). The model project stipulated the following economic, environmental and institutional aspects:

- key acting persons and partners were identified;
- social, economic and natural resources (sufficiency-deficiency) were defined both at the level of individual villages and at the Jamoat as a whole;
- prospects and potential of grazing development were assessed at the village and Jamoat level and the sustainability of current methods of pasture management;
- main environmental, social and environmental risks of grazing were assessed currently and in the future at the village and Jamoat level;
- potential and existing conflicts were identified as well as social, environmental and landscape issues and the extent of the impact on grazing development;
- modules of the pasture system were described (watering, pasture rotation, access to roads, shelter for livestock, veterinary services, preparation of fodder for the winter and etc);
- preparation of action plans with indication of executors, sources of funding and timing;
- cartographic materials were prepared (pasture rotation schemes, the location of the main modules, etc.) for management purposes;
- guidance on pasture management at the Jamoat level were prepared comprising: identification of the need and possible preparation plans, risk assessment, issues and resources, ways of conflict resolution, and the organization of planning and monitoring to ensure sustainability;
- training modules were developed to improve knowledge and skills of beneficiaries at the village and Jamoat level;
- Execution of works to allow for successful use of approaches developed by the model area in other similar conditions in Tajikistan.

Project implementation identified key aspects related to pasture degradation (the causes, extent and rate of degradation); outline main directions for pasture improvement and the reduction of pasture use by specific organizational, economic, and agricultural, animal husbandry, veterinary measures and methods as well as educational technology and public awareness raising. An action plan was developed on pasture improvement and conditions created for pasture user associations at the Jamoat level.

6.3. “Assistance in local market development and fruit (drying) processing”.

Within the framework of this component marketing plans were developed that stipulated the demonstration of technologies for processing of agricultural products, such as a tunnel dryer and improved trays for drying of agricultural products, establishing business contacts with potential buyers, as well as creating conditions for possible assistance from other projects in the future and initiatives upon completion of CAWMP implementation. Dissemination activities, organization of training and provision of technical materials facilitated a large number of Community Interest Groups in understanding the key aspects of marketing.

A work plan was also developed which included: (a) assessment of existing and future levels of agricultural production in project villages where the emphasis is on production of certain agricultural products, including mainly apricots and apples, and (b) the organization of training on the wide range of issues (including the value chain, quality of products and quality standards, processing technology (including the use of trays for drying and tunnel dryers) and preparation of business plans) as well as development of appropriate work plans by farm production groups, and (c) the establishment of business relations between farmers groups of the project, local experts, local enterprises on products processing and the projects funded by donor organizations.

The main work was carried out in two Jamoats, namely Shirinchashma (Tojikobad district) and Urmetan (Aini district), including additional project activities at district level - in seven districts of project area with the view to cover a wider target audience.

In addition the Project concluded a contract with NGO, which would provide the necessary assistance and close cooperation with other projects in agricultural marketing, such as USAID / PRO-APT, GIZ - Rural Development Programme and the Helvetas - Local Market Development Project.

7. Lessons Learned and Recommendations

The project has successfully achieved considerable results responding to the needs of beneficiaries. CAWMP is a success because it has changed the way farmers grasp their potential for income generation and their relationship with environment. An important impact of the project is that the numerous small grants to groups of farmers at the village level has resulted in these beneficiaries being exposed to a large number of potential agriculture and environment related activities; as interviews for the final evaluation showed, the beneficiaries are far more open minded now thanks to this project: they exchange views and ideas on new income generating activities, discuss the advantages and disadvantages of subprojects, their technicalities or consider replicating similar small-scale initiatives.

Project design:

- **Participatory planning along with village and household budget limits was an effective mechanism for villagers to prioritize and assess risks of various options, as well as allocate resources.** Furthermore, open disclosure of available funds and amounts allocated to investments improved accountability. To further disseminate this aspect, the process and results need to be documented (some documentation already underway) and then share widely with government, donors and other implementing agencies and organizations so that similar measures can be included in future planning processes.

- **Right of Use of Land Certificates (RULC) are key for sustainability, especially for land related subprojects in CAWMP and for other similar initiatives.** According to the CAWMP design the RULC should be issued after 3 years of successful using of subproject (land). However, during the project implementation and RULC issuance process it was learnt that it would be better if the RULC is given after 1 year of starting of subproject, even a half year is acceptable. It increases the confidence of farmers to use the land as a real user and owner, and the certificates should be issued without delays.

- **Although it was not in the project objectives to address broader policy and legal issues related to pastures and rangelands, sustainable rangeland management will require policy and legal support informed by practical, field-based examples and experiences such as those implemented in CAWMP.** The project has reduced overgrazing pressure locally within villages' territories through several types of subprojects and demonstrated activities that contribute to sustainable rangeland management. Grazing rights are a sensitive topic because it involves several types of farmers with potentially conflicting interests (family farmer, sheep farmer, *Dekhan* farms, and commercial private stock breeder) and might require new legislation and /or law enforcement.

- **Research and demonstration of appropriate technologies can be integrated differently at project design.** The success of the Farmers Competition shows that agricultural innovation and good practice can be demonstrated and shared in an efficient and effective way. While research institutes have shown limited practical skills for small-scale applications, new technologies in upland farms remains a high priority as it increases the value of subprojects even though this may be risky in terms of adoption.

New technologies / varieties can be tested first on farmer's plots, their added value demonstrated before sharing with local authorities and other interested parties. A more practical approach and different from the focus on research institutes can be considered at *raion* (*Jamoat*) level through Farmer Field Schools - reproducing farming real conditions. In that case, a strong linkage should be established between the Research (NGO, institute) – Demonstration (farmer's plot with the assistance of FO & *Hukumat*) – Dissemination (FFS³²) (demonstration by farmers and FO). Linking these activities with government programs or priorities may help to some extent to encourage *Hukumat* authorities to keep engaged at the end of a project. It should be noted that these types of activities will require international assistance of the type that was planned under CAWMP from IFAD and ICARDA but which unfortunately did not materialize.

A similar approach can be adopted when considering preservation of rare endemic species (inventory –demonstration (preservation / conservation garden) – dissemination (of species of interest): a new role for demonstration farmers might also be devised in preserving rare / endemic species (which would on-site strengthen farmer's awareness on environment degradation through FFS).

- **An additional project component (e.g., value chain development, association formation) to serve successful beneficiaries would have been beneficial to support market development for subproject products.** This would be of benefit when production levels for certain items such as fruit, vegetables, honey, etc., are enough to sell more commercially. Not all CIGs have the capacity to understand marketing opportunities and how these might be exploited.

- **Female participation can be strengthened through additional processes during planning.** Women beneficiaries were positively represented in CIGs with 40% of beneficiaries listed as female but the approach from the beneficiaries' point of view seemed at times to be more like filling 'quotas' than reflecting women's concerns. Taking into account local cultural circumstances, it may be possible to focus on gender specific credibility grants, gender oriented participatory planning resulting in a more integrated community action plan and subprojects focusing on women's strengths.

³²Farmer Field Schools

Implementation:

- **Scale and scope of JDC mandates is effective for delivering services to upland, and often remote, farmers.** In CAWMP sub-district level organizations proved to be an effective component of scaling-up strategies for SLM in a challenging physical landscape. In the project 39 JDC's handled more than 3,800 CIGs and over US\$7.0m in fund transfers. Additionally, participatory processes helped ensure that organizations such as JDCs worked effectively with government management units to deliver technical and financial resources to farmers. Future efforts should maintain a focus on strengthening sub-district level support to farmers with scaling-up strategies requiring investment in institutional arrangements. It will be important to ensure that participatory processes, including financial management mechanisms, are well integrated into SLM programs.
- **The TOR for FOs should be clearer so as to help ensure financial proposals with a consistent amount of CIG follow-up.** The quantity and quality of the FO's support has been wide ranging; some FOs were to support CIGs with less funds but 5 or 6 times more subprojects than other FOs. In this context, trainings, follow-up of CIGs, monitoring cannot be of the same intensity between FOs. Contracting also needs to take into account the existing presence and resources that FOs have in the geographical area of operation.
- **Upon contracting FOs, a comprehensive introduction, e.g., workshops, seminars, would have been beneficial to explain the objectives and rationale behind the project** so that expectations and roles of all parties were better understood. A lack of orientation from PMU at the start of the project, itself due in part to lack of steering by the project design team resulted in PMU, PCU and FO's using different approaches and independently. This resulted in some cases in confusing messages for project beneficiaries and difficult relationships between the implementing agency (at PCU level – to a lesser extend at PMU level) and the FOs.
- **At PCU level, it would be beneficial to have an M&E specialist so as to relieve PMU monitoring efforts.** Monitoring at the PCU level was primarily of financial aspects with little attention on analyzing the project implementation pace, suggesting improvements or monitoring of impact. M&E and financial specialists tended to be reactive to PMU M&E requirements and not proactive. At the same time, any future M&E efforts also need to take into account the limited capacities and skills available in field locations as well as salary scales for government jobs.
- **A simpler and clearer operational manual for rural investment preparation would have been more effective.** The manual is very comprehensive and relatively clear for professional staff but for villagers, especially the less well educated, it posed difficulties. The requirements for environmental analysis, the business plan and the design and calculations of rural infrastructure were not well understood at project start-up. This resulted in JDC and FOs often preparing the proposals for those beneficiaries, leading to delays in preparation and/or grants approval because the information provided by CIGs was incomplete. Future guidelines must accommodate the skill levels of these beneficiaries with clearer and simpler guidelines for environmental analysis and feasibility assessment. Similarly, the proposal format requirements need to be simplified for future operations so that they can be done in time and for the most part prepared by beneficiaries.

While the manual was comprehensive on certain aspects such as approval processes, FOs had considerable flexibility in the participatory rural appraisal (PRA) process leading to the preparation of the Community Action Plans and the choice of investments by villagers. As a result, there was variation in the quality of some proposals and some questionable investment choices. In future, establishing a set of minimum PRA requirements for CAP preparation should help ensure that key issues are analyzed consistently. These would include participatory environmental analyses, training in which was provided to project partners part-way through the project.

- **Training in community driven development procurement procedures** would have been beneficial for PMU and PCU staff as well as other project partners. Such training would have enabled staff to be aware of the flexibility possible in this approach and be more able to provide suitable advice to beneficiaries, e.g., the options available regarding how many local shopping quotes are needed for local procurement.

Comments on Draft ICR

Unofficial translation of the Letter received from Mr. Jalil Piriev, Head of the Department of Agriculture and Land Use under the Executive Office of the President, Republic of Tajikistan

Department of Agriculture and Land Use
Executive Office of the President

Date: December 7, 2012

Ref#: 201

To: Mrs. Marsha Olive
World Bank Country Manager for Tajikistan

Dear Mrs. Olive,

First of all, let me thank you for the opportunity to comment on the draft Implementation Completion Report prepared by the World Bank for Community Agriculture and Watershed Management Project (CAWMP). The Government of the Republic of Tajikistan is interested in obtaining an objective independent assessment on the results of projects implementation, in order to learn lessons from the experience of implemented projects.

The Community Agriculture and Watershed Management Project (CAWMP) was one of the first projects in Tajikistan aimed at the implementation of measures to encourage further development of agricultural production, rather than merely provision of humanitarian aid. This project was a starting point and had a great impact, because in addition to being designed to ensure growth of agricultural production and sustainable management of natural resources, it also provided opportunities for collective decision-making by the community residents with regards to various investments to be made. The project was aimed at addressing two major problems in Tajikistan: reducing poverty through agricultural development and accumulation of income and prevention of environmental degradation through application of sustainable land management methods and practices. The project implementation objectives corresponded to the content of government programs and priorities which include food security, poverty reduction, horticulture development, sustainable pasture management and improving climate change resilience. Difficulties associated with the achievement of goals, as well as creation of new jobs, include the need for market expansion, further improvement of the knowledge base in agriculture and establishment of advisory services to assist in the development of agricultural production, product processing, and land management. In addition, the priority for the Government is also to protect mountain ecosystems that are at risk, such as grasslands and forests that make up the unique collection of the genetic diversity of wild plants.

The project achieved significant results, given the adjustments that were made in the course of its implementation in the design and its development concept by working closely with the communities that were to determine their needs, and also provided for direct participation of rural people in the allocation of funds, decision-making, implementation and monitoring of activities at

the local level, where Jamoat Development Committees played a key role. This initiative is fairly new for the country, and its successful implementation required additional effort on the part of the implementation agency and other organizations involved in the implementation. 40% of investments aimed at improving agricultural production and land management, have been used for the application of advanced technology and gaining wide access to necessary materials and knowledge.

The fact that some activities also contributed to the reduction of risks associated with land degradation due to soil erosion, as well as the improvement of soil resources needed for sustainable land use, was very important. At least 10,700 hectares of reinforced slopes and reclaimed land demonstrated positive outcomes. In addition, in line with beekeeping development program, farmers created more than 5,300 hives that contribute to the revival of a very important economic activity, as well as an ecological process, which is vital for agricultural production and conservation of biological diversity. Also, small grants were provided to farmers groups to plant more than 1.3 million trees on their land covering a total area of approximately 3,000 hectares.

Unfortunately, the project failed to establish a mechanism for the post-project sustainability and saving the results. This is primarily due to the fact that the project was not integrated into the system of the Ministry of Agriculture and not aligned with the policy in the agricultural sector. It would be desirable to establish the project implementation mechanism that would ensure clear division and understanding of the roles among the different project partners, especially those who have worked in the field. In addition, cooperation was not established in the course of project implementation with the Tajik Academy of Agricultural Sciences, Institute of Soil Science and the Institute of Farming Agriculture in order to develop and strengthen the capacity of professionals to provide advisory services and training for communities. Only a certain support was provided to the Institute of Botany in the arrangement of several scientific expeditions to identify more than 300 endemic and rare species of plants, including fruit trees.

We agree with the assessment made by the World Bank with regards to the project and in general and are grateful for the assistance in the development of the agriculture sector.

Sincerely

J.Piriev

Annex 8. Comments of Cofinanciers and other Partners/Stakeholders

Not applicable.

Annex 9. List of Supporting Documents

GEF (2004), Global Environment Facility Trust Fund Grant Agreement, Grant No. 053572-TJ, World Bank, Washington, DC.

Government of Tajikistan (2012), Community Agriculture and Watershed Management Project: Project Completion Report, PMU report, April 25, Dushanbe, Tajikistan.

World Bank (2003), Environmental Assessment, Volume 1: Environmental Management Framework, World Bank, Washington, DC.

World Bank (2003), Environmental Assessment, Volume 2: Pest Management Plan, World Bank, Washington, DC.

World Bank (2004), Development Financing Agreement, Credit No. 3928-TJ/ Grant No. H097-TJ, World Bank, Washington, DC.

World Bank (2004), Community Agriculture and Watershed Management Project, Project Appraisal Document, Report No: 28913 - TJ, World Bank, Washington, DC.

World Bank (2012), Farmer and Farm Worker Perceptions of Land Reform and Sustainable Agriculture Study, Report No: AAA81 – TJ, World Bank, Washington, DC.