

Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: 28913-TJ

PROJECT APPRAISAL DOCUMENT

ON A

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

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

AND A
PROPOSED GRANT FROM
THE GLOBAL ENVIRONMENT FACILITY TRUST FUND
IN THE AMOUNT OF US\$ 4.5 MILLION

TO THE

REPUBLIC OF TAJIKISTAN

FOR A

COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

May 10, 2004

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

Somani 2.9 = US\$ 1.00i US\$ 1.49522 = SDR 1

ABBREVIATIONS AND ACRONYMS

ACTED	Agency of Technical Cooperation and Development Aid (French)	MIWR	Ministry of Irrigation and Water Resources
AKF	Agha Khan Foundation	MSDSP	Mountain Societies Development Support Program
BP	Bank Procedures	NBFO	Non Bank Financial Organization
CAP	Community Action Plan	NSIFT	National Social Investment Fund of Tajikistan
CAWMP	Community Agriculture and Watershed Management Project	NPV	Net Present Value
CBO	Community Based Organization	NSIFT	National Social Investment Fund of Tajikistan
CIDA	Canadian International Development Agency	OD	Operational Directive
CIG	Common Interest Group	OP	Operational Policy
EA	Environmental Assessment	PCU	Project Coordination Unit
EMF	Environmental Management Framework	PMP	Pest Management Plan
FAO	Food and Agriculture Organization	PMU	Project Management Unit
FPSP	Farm Privatization Support Project	PPAP	Pilot Poverty Alleviation Project
GAA	German Agro Action	PRSP	Poverty Reduction Support Program
GDP	Gross Domestic Product	RIRP	Rural Infrastructure and Rehabilitation Project
GEF	Global Environment Facility	RRDP	Rural Reconstruction and Development Program
GP	Good Practice	SCNP	State Committee for Nature Protection
GRT	Government of the Republic of Tajikistan	SDP	Standard disbursement percentage
ha	Hectare	SIDA	Swedish International Development Agency
IDA	International Development Association	SLSC	State Level Steering Committee
IFAD	International Fund for Food and Agriculture	SPAP	Second Poverty Alleviation Project
IRR	Internal rate of return	TOR	Terms of reference
JDC	<i>Jamoat</i> Development Committee	UNDP	United Nations Development Program
LG	Local Government (<i>Oblast, Raion</i> or <i>Jamoat</i> level)	US	United States
m	Million	WDA	Watershed Development Committee
MCI	Mercy Corps International	WUA	Water User Association
MOA	Ministry of Agriculture		
MOU	Memorandum of Understanding		

Vice President:	Shigeo Katsu
Country Manager/Director:	Dennis de Tray
Sector Manager:	Marjory-Anne Bromhead
Task Team Leader:	T.V. Sampath

FOR OFFICIAL USE ONLY

**TAJIKISTAN
COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT**

CONTENTS

	Page
A. STRATEGIC CONTEXT AND RATIONALE	1
1. Country and sector issues.....	3
2. Rationale for Bank involvement	4
3. Higher level objectives to which the project contributes.....	5
B. PROJECT DESCRIPTION.....	6
1. Lending instrument	6
2. Program objective and phases.....	6
3. Project development objective and key indicators.....	6
4. Project components	7
5. Lessons learned and reflected in the project design.....	9
6. Alternatives considered and reasons for rejection	9
C. IMPLEMENTATION.....	10
1. Partnership arrangements.....	10
2. Institutional and implementation arrangements	10
3. Monitoring and evaluation of outcomes/results.....	11
4. Sustainability and replicability	11
5. Critical risks and possible controversial aspects.....	12
6. Credit conditions and covenants	13
D. APPRAISAL SUMMARY	14
1. Economic and financial analyses	14
2. Technical.....	15
3. Fiduciary	15
4. Social.....	16
5. Environment.....	17
6. Safeguard policies.....	17
7. Policy exceptions and readiness.....	18

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not be otherwise disclosed without World Bank authorization.

Annex 1: Country and Sector Background	19
Annex 2: Major Related Projects Financed by the Bank and/or other Agencies.....	27
Annex 3: Results Framework and Monitoring.....	28
Annex 4: Detailed Project Description	34
Annex 5: Project Costs.....	45
Annex 6: Implementation Arrangements.....	46
Annex 7: Financial Management and Disbursement Arrangements	51
Annex 8: Procurement	51
Annex 9: Economic and Financial Analysis	60
Annex 10: Safeguard Policy Issues.....	70
Annex 11: Project Preparation and Supervision	73
Annex 12: Documents in the Project File	74
Annex 13: Statement of Loans and Credits	75
Annex 14: Country at a Glance.....	76
Annex 15: Incremental Cost Analysis	78
Annex 16: STAP Roster Review	86
Annex 17: Social Analysis.....	96
Map.....	98

TAJIKISTAN

COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT

PROJECT APPRAISAL DOCUMENT

Europe and Central Asia Region
ECSSD

Date: May 10, 2004	Team Leader: Thirumangalam V. Sampath
Country Director: Dennis N. de Tray	Sectors: General agriculture, fishing and forestry sector (100%)
Sector Manager: Marjory-Anne Bromhead	Themes: Other environment and natural resources management (P); Environmental policies and institutions (S); Water resource management (S); Participation and civic engagement (S)
Project ID: P077454	Environmental screening category: Financial Intermediary Assessment
Lending Instrument: Specific Investment Loan	Safeguard screening category: Requires framework

Project Financing Data

☐ Loan ☒ Credit ☒ Grant ☐ Guarantee ☐ Other:

For Loans/Credits/Others:

Total Bank financing: IDA Credit SDR 3.4 Million (US \$ 5.0 Million equivalent) and
IDA Grant SDR 3.9 Million (US \$ 5.8 Million equivalent) and
GEF Grant US\$ 4.5 Million

Proposed terms:

Financing Plan (US\$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT	2.00	0.00	2.00
INTERNATIONAL DEVELOPMENT ASSOCIATION	2.94	2.06	5.00
IDA GRANT FOR POOREST COUNTRY	3.29	2.51	5.80
LOCAL COMMUNITIES	1.75	0.74	2.49
Financing Gap	-1.46	1.46	0.00
Total:	8.52	6.77	15.29

Borrower:

Republic of Tajikistan, Dushanbe, Tajikistan

Responsible Agency:

Project Manangement Unit, No: 44, Rudaki Avenue, DUSHANBE , Tajikistan

Tel: (992-372) 21-00-21; 21-13-67 Fax: (992-372) 21-85-66,

E-mail: <r_center@Tajnet.com>; <FPSP@Tajnet.com>

Estimated Disbursement (Bank FY/US\$m):

FY	6	7	8	9	10	11	12
Annual	0.60	0.70	0.80	1.40	2.20	3.00	2.10
Cumulative	0.60	1.30	2.10	3.50	5.70	8.70	10.80

Does the project depart from the CAS in content or other significant respects? Ref. PAD A.3	[] Yes [X] No
Does the project require any exceptions from Bank policies? Ref. PAD D.7	[] Yes [X] No
Have these been approved by Bank management?	[] Yes [] No
Is approval for any policy exception sought from the Board?	[] Yes [X] No
Does the project include any critical risks rated “substantial” or “high”? Ref. PAD C.5	[X] Yes [] No
Does the project meet the Regional criteria for readiness for implementation? Ref. PAD D.7	[X] Yes [] No
<p>Project development objective Ref. PAD B.2, Technical Annex 3</p> <p>Build the productive assets of rural communities in selected mountain watersheds, in ways which sustainably increase productivity and curtail degradation of fragile lands and ecosystems</p>	
<p>Project description [one-sentence summary of each component] Ref. PAD B.3.a, Technical Annex 4</p> <p>1) Rural Production Investments that will include investments in farm productivity improvements, land resource management aspects, and rural infrastructure.</p> <p>2) Institutional Support and capacity building to support research and dissemination as well as community mobilization and subproject preparation.</p> <p>3) Project Management to support coordination and implementation of project activities.</p>	
<p>Which safeguard policies are triggered, if any? Ref. PAD D.6, Technical Annex 10</p> <p>Environmental Assessment (OP/BP/GP4.01)</p> <p>Pest Management OP (4.09)</p>	
<p>Significant, non-standard conditions, if any, for:</p> <p>Ref. PAD C.7</p> <p>Board presentation:</p> <p>None</p> <p>Loan/credit effectiveness:</p> <p>1) Deposit of US\$ 50,000 equivalent in local currency in project account in a local commercial bank, acceptable to IDA to meet the initial requirement of counterpart funds; 2) SLSC adoption of operational manual outlined in the PIP, 3) The GEF Trust Fund Agreement has been duly executed and delivered, and all conditions related to its effectiveness, or the right of the Borrower to make withdrawals against it, have been fulfilled.</p> <p>Covenants applicable to project implementation:</p> <p>i) Auditing. The project will adopt Guidelines for Financial Reporting and Auditing of Projects Financed by the World Bank (June 2003). The Borrower will appoint an independent auditor. The external audit will be carried out by independent auditors in accordance with International Standards on Auditing (ISA) and a terms of reference acceptable to IDA by December 31, 2004, and the audit will be carried out within six months of the end of the project’s fiscal year.</p> <p>ii) The Borrower will open and properly maintain separate special account for (a) IDA Credit; (b) IDA Grant; and (c) GEF Grant. In addition, open independent special account for each of the Donors financing project activities.</p> <p>iii) Rural production investments will be prepared, cleared, and implemented in accordance with</p>	

organizational arrangements and operational procedures agreed with the Association. The first ten subproject proposals and associated draft Memorandum of Understanding between the beneficiary and the JDC for each watershed will be subject to review and clearance by IDA.

iv) The government shall promptly register land usufruct rights in the name of the groups or households who have preformed in accordance with agreed land resource management subproject parameters.

v) No human settlements will be displaced as a result of project activities, and any adverse impacts on vulnerable people of any other restrictions of access to land resulting from project activities will be mitigated by project investments directly benefiting the affected people.

vi) The project shall be implemented in accordance with the agreed environmental management framework and pest management plan.

vii) The PMU and PCUs would be maintained, adequately staffed, and provided with performance based incentives acceptable to IDA.

viii) Standard reporting covenants will apply; the PMU will report to IDA on a half-yearly basis its monitoring and evaluation reports and the status of the agreed key monitorable indicators, and a project design and implementation review would be undertaken, by IDA in December 2007, to determine the lessons learnt and make appropriate changes, if needed, in the project objectives, scope and components.

ix) A line item will be provided in the annual national budget beginning 2004 for funds required for implementation of each project component. By September 30 of each year, the Government shall review the provision for counterpart funds and confirm that an adequate allocation for project implementation will be included in the budget for the following calendar year.

A. STRATEGIC CONTEXT AND RATIONALE

1. Country and sector issues

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 in its 6.3 million (m) population. Independence turmoil and civil war left it among the poorest countries in the world, but the economy is now developing. As of 2000 annual per capita income was only around US\$180, and some 83% of the population were poor, but during 2000-2003, real GDP growth has ranged from 6% 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 is directly dependent for their living on Tajikistan's 4.6 m ha of agriculture land, of which only about 850,000 ha are arable lands, and the remaining 3.86 m ha are pasture, fallow lands and meadows.

Highland areas and land degradation. About twenty percent of the population lives in hilly and mountain areas where access to most government services is limited. Most of the 2.5 m ha agricultural land they farm is pasture, only 206,000 ha are in perennial crops and orchards, and there are few significant irrigation systems. Rural poverty, shifts in land management responsibilities, lack of integrated land management, inappropriate agriculture, and poor access to technical support are causing increasing land degradation. Much of the population are now using steep hillsides to grow cereal crops. In turn, land degradation contributes 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 have good productive potential if appropriately farmed. In addition to improving life for people in the highlands, utilizing this potential in sustainable ways will also prevent downstream damage and relieve pressure on the lowlands.

Mountain ecosystems. Tajikistan has globally important mountain ecosystems with diverse flora and fauna, including many of economic importance, and under threat. Pastures, for example, host over 3000 plant species, but face threats from localized over-grazing. The wild-growing fruit plants of Tajikistan represent a unique genetic resource for agriculture. The mountain territories of southern and southeastern Tajikistan are 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). Forest areas that cover only 3 % of the country's territory, decreased by about 15% due to the need for firewood.

Farm privatization. Officially, some 55% of all arable land has been converted into lease farms, joint stock companies and family farms. However, in lowland cotton growing areas, farmers are still not free to make their own management decisions, while in highlands they lack the capital needed to exploit the productive potential. Furthermore, there are also large tracts of pasture, formerly under the control of state farms, which are now under the control of Jamoats¹. These pastures face problems of inadequate maintenance as well as arbitrary and inequitable access to grazing rights and land use. For details, see Annex 1.

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) emphasizes accelerated growth, provision of basic social services, targeted support for the poor, and improved governance. The governance initiatives include more local planning and management, especially at the Jamoat level. For the agriculture sector, the Government's strategy supports 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 highlights the regional dimension to poverty, with the highlands facing special difficulties, especially in the south-east. For the environment, the PRSP emphasizes 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 are considered government priorities as documented in the National Strategy for Combating Desertification (2002), and the National Biodiversity Conservation Action Plan (2003). Tajikistan is 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 is 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, improve technical support services, and improved access to rural finance. However, there are still 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 is inadequate) limit the extent of overall program impacts. For details, see Annex 1. Bank projects are 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.

2. Rationale for Bank involvement

Bank experience and potential for scaling up. Bank support will build upon the experience, analysis and relationships already established under its projects and sector work, and under programs of other donors. The Bank has extensive operational experience in local demand-driven approaches to agricultural development. Past Bank support has also demonstrated the use of field level pilot experience to constructively influence crucial policy and legislation. Bank-financed projects within Tajikistan have 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 is 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 is 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 provides 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 comes from its ability to work at all levels of the Government, conducting policy dialogue at the top, 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 complement the Community Agriculture and Watershed Management Project (CAWMP). The Bank's value added to CAWMP comes from (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; and (c) involving government and developing its capacity to play appropriate roles that foster the desired outcomes, (d) experience in implementing similar projects in other countries (e.g., Turkey, Armenia). The Bank is able to share a wide range of such 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.

3. Higher level objectives to which the project contributes

Borrower's Objectives. The project is consistent with the PRSP, and responds to the Government request. Investments will directly contribute to accelerated growth. The geographical focus targets the disadvantaged. The community driven approaches, integration with local government, capacity development, and project administration address overall governance strengthening. The project is also consistent with the borrower's agriculture and environment strategies. The bottom-up approach improves the site-specific allocation and use of resources (land, biological, water, and financial). The land management subcomponent will improve land access and tenure security, creating an incentive structure that links rights to responsibilities.

Bank Country Assistance Strategy. The proposed project is a priority in the 2003-2005 Country Assistance Strategy. It meets the Bank's three strategic engagement principles: (a) it responds to a "strong client pull" and interest in reform, especially from the district and raion government levels, and targets some of the country's poorest areas, (b) it uses a programmatic approach focused on transfer of knowledge and capacity by having communities identify and undertake their own development priorities, and (c) it works in partnership with NGOs that have acquired significant experience in working in the difficult rural mountain environment. CAWMP forms a key element of the Bank's vision for community-linked development in Tajikistan, which involves participatory local investment initiatives which partner directly with communities, and support at the Jamoat-level for self-governance, citizen accountability, and coordination. The project addresses the CAS objective of selective support furthering the Government's PRSP agenda by

- generating growth through private sector development, especially in the area of agriculture and related agribusiness development, and

- strengthening the institutions needed for a market economy, including combining usufruct rights with land management responsibilities on fragile mountain lands, establishing sustainable member-owned credit entities, and building capacity and knowledge to meet technical and marketing requirements for viable income-generating investments.

It is consistent with ECA's Rural Development Strategy which includes strategic pillars of improving agricultural productivity and land and water management. The project is also consistent with the Bank's Biodiversity Strategy for ECA, which includes a priority on combining improved ecosystem management with local income generating activities. It addresses the Global Environment Facility (GEF) Operational Program (OP) 12: "Integrated Ecosystem Management", combining the concerns of Land Degradation OP 15: "Sustainable Land Management", Biodiversity OP 4: "Mountain Ecosystems", OP 13 (Biodiversity: Conservation and Sustainable Use of Biological Diversity Important to Agriculture), and OP 9 (International Waters: Integrated Land and Water Multiple Focus Area).

B. PROJECT DESCRIPTION

1. Lending instrument

The specific investment project will be financed by US\$ 5.0 m International Development Association (IDA) Credit and US\$ 5.8 m IDA grant, and US\$ 4.5 m Global Environment Facility (GEF) grant.

2. Program objective and Phases

The long-term vision is to build the productive assets of the population in Tajikistan's rural highlands. Intended results include increased agricultural productivity and associated household incomes, and land and ecosystem rehabilitation. The six-year project would take place in four highland watersheds covering catchments of over 36,000 km², with agricultural areas covering about 390,000 ha, with a population of about 550,000 people (42% of Tajikistan's mountain population). The project would begin in Surkhob during the first year, and gradually expand to include the Vanj, Zarafshan, and Toirsu watersheds within the first three years in accordance with phasing outlined in Annexes 3 and 4. The project would cover 47 of the 64 Jamoats in these watersheds, and would expand to the remaining Jamoats if additional financing from other donors becomes available, as anticipated, after project inception. Jamoats, villages within the Jamoats, and subprojects would be phased in gradually. Over the project period, activities and funding would be distributed relatively evenly within the participating Jamoats, and directly benefit at least half their population. Even before the project ends, it may be possible for donors and/or the government to support comparable programs in additional watersheds. Within the project areas, reinvestment of earnings and the revolving financing mechanism will enable sustainability and further deepening of the program after project completion.

3. Project development objective and key indicators

Project objective. The project objective is 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.

GEF Objective. The global environmental objective will 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 will also provide replicable models for comparable areas throughout the country. The GEF objective is mainstreamed into the overall development objective and outcomes.

Outcome indicators. The key outcome indicators will comprise

- 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.
- At least half the households where the project is operating (i.e. 32,000) directly participate in some part of the rural production component.
- Increase in proportion of project participants who are living above the poverty line from 3% to 30%.
- Land and mountain ecosystem degradation trends halted (also pertains to GEF)

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

- 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 proportionate to their numbers in a community (also pertains to GEF)
- Number of improved public facilities, disaggregated by type of investment (e.g., village drinking water, roads, and electricity)
- Forty seven JDCs overseeing rural production investments
- Forty percent 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 (also pertains to GEF)
- Satisfactory project administration as indicated by Bank supervision ratings and project's public reputation for integrity

4. Project components

Project costs total about US\$19.8 m over six years. Project activities comprise:

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

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

B. Land Resource Management: This subcomponent enables local people to adopt more sustainable use of fragile lands that are currently under the jurisdiction of the Jamoat, and provide land use certificates after three years of maintenance, subject to continued good land use. The combination of appropriate income-generating investments with soil conservation will enhance the organic content of the 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 will make long-term investments such as horticulture, woodlots, or fodder, combined with soil and moisture management structures. Blended financing from GEF will 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 will be made to community groups. Typical investments would compliment the agriculture and land resource management subprojects, would be small scale (about \$4800 on average), and may include drinking water, small irrigation, access track rehabilitation, and small power generation.

Contribution Requirements and Budget Constraints. Beneficiaries have 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 will 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 will be provided either through reinvestment of retained earnings, or through credit or revolving funds². Rural infrastructure is restricted to productive investments and must include operations and maintenance financing arrangements. They will only be made if no alternative funding is available from other donor programs such as the National Social Investment Fund of Tajikistan (NSIFT).

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

A) Research and Demonstration: This subcomponent helps scientific institutions and line ministries to provide technical services including training to communities. It will include support for seed and seedling production, livestock breeding and animal health and husbandry improvements, and market and enterprise analysis and development. Participating agencies include 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 will also benefit. Blended GEF financing supports the preservation of indigenous crop and other specimens.

B) Community Mobilization and Subproject Preparation: This subcomponent includes 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 includes support for small confidence building mobilization grants for each village, plus information and experience sharing. Blended GEF financing enables the planning and sharing associated with the additional land resource management investments.

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

This component supports 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 builds on project administration capacity and arrangements that already exist for ongoing Bank financed projects. The component also supports the secretariat services provided to the State Level Steering Committee (SLSC) and the Watershed Development Committees (WDCs) . The component supports:

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

² 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)

Blended GEF financing enables more detailed 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. Details are in Annex 4.

5. Lessons learned and reflected in the project design

The project design reflects major lessons from past and ongoing projects (e.g., the FPSP, Rural Infrastructure Rehabilitation Project (RIRP), Pilot Poverty Alleviation Project (PPAP), Second Poverty Alleviation Project, and also from the recently completed ICR of the Eastern Anatolia Watershed Rehabilitation program and other Bank projects involving mobilizing the community for ensuring sustainable agriculture and land management investments. The project also builds on community development programs of AKF, UNDP/RRDP, and other donors working in Tajikistan's mountain areas. Lessons are summarized below.

- *The participatory process cannot be target driven.* Communities should identify and choose their own priorities, and solve their own problems.
- *Design and implementation should build on existing mechanisms with suitable external TA.* The project strives wherever possible to use available local knowledge and capacity, builds on existing structures such as JDCs and public institutes, and provides training to further strengthen that capacity;
- *Training should be timely and appropriate.* Training and institutional capacity to local communities and local government needs to take place at an early stage.
- *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;
- *All stakeholders need to be included.* The project works at all levels of government and reaches out to vulnerable people including women.

6. Alternatives considered and reasons for rejection

Several alternatives were considered and rejected:

- As opposed to focusing on the lowlands, a focus on highlands inherently targets the poorest yet also builds on: significant potential for agricultural growth, strong cohesion within communities, and recent reform initiatives (e.g., land privatization, Jamoat governance). The highlands focus also addresses important land degradation and biodiversity threats, and complements the focus of the Bank's present agricultural operations on the lowlands.
- The project involves Jamoats, rather than just focusing on the village level in order to strengthen the sustainability and coordination of community initiatives, build the accountability of local government to its citizens, and to facilitate scaling up.
- CAWMP provides specialized support for economically productive investments in agricultural development and land management in order to generate household income, rather than channeling general funding for community infrastructure through NSIFT. Unlike NSIFT, CAMWP is explicitly designed to provide the technical backing and linkages with scientific institutes required for the agriculture and land management investments, and takes new steps in pioneering a new community-linked approach involving JDCs. CAWMP leverages GEF support. Furthermore, instead of the competitive grants used in NSIFT, CAWMP spreads its small investment support evenly across all villages within the participating highland Jamoats, and specific investments are prioritized by local people within a fixed budget constraint. CAMWP's poverty targeting stems from its location, where 97% of the population are below the poverty level. In contrast to NSIFT, the rural infrastructure investments supported under CAMWP will be smaller scale on average, will be

closely connected with agricultural requirements, and will not include social infrastructure (e.g., education and health facilities).

- The project is providing catalyst grants rather than relying on credit for rural production investments because the project areas are not well monetized (local trade uses potatoes in lieu of currency), access to banks is poor, environmental “public good” benefits are significant, and subprojects are small relative to transaction costs.

C. IMPLEMENTATION

1. Partnership arrangements

The project will collaborate with the UNDP and the Urban Institute who are working on JDC development and local governance. A number of donors, including the International Fund for Agriculture and Development (IFAD), Swedish International Development Agency (SIDA), and Canadian International Development Agency (CIDA) have expressed an interest in the possibility of providing funding for an expansion of the project, although they require more time to formally commit their funds³. The project will also involve collaboration with existing programs of Food and Agriculture Organization and the CGIAR. The project will also use international NGOs to provide facilitation support, using mostly local personnel. These NGOs and other donors have established community driven programs in the project area, many of which have influenced the project design. However some details vary from donor to donor. In communities receiving such support, care will be taken to consult with these donors to ensure that the project and other support are complementary, and do not exceed the absorptive capacity of the community. In addition, the project will foster ongoing exchange of relevant experiences both within the country and in other countries.

2. Institutional and implementation arrangements

The project uses and strengthens an existing local institution, the JDC. JDCs comprise the elected representatives of villages plus the government’s Jamoat official. JDCs will not only play a crucial role coordinating among project activities, but also help coordinate these with non-project activities of other donors. UNDP has already supported the development of JDCs in the Surkhob valley under its RRDP. In coordination with other donors, UNDP will continue to strengthen these JDCs and also mobilize new JDCs in other watersheds. For the project period, contracted NGOs will (a) help JDCs mobilize households and common interest groups to develop and implement subproject proposals within an overall village action plan, (b) guide and assist JDCs in compiling and considering these proposals in consultation with line agency, other specialists, and other donors, and (c) serve as the major conduit for fund flow to subprojects. They will help develop local skills, including skills in bookkeeping, infrastructure operations and maintenance, consideration of social and environmental issues, and monitoring. Transparency will be maximized to discourage corruption, and planning and review procedures will be kept simple to address capacity limitations. Even before the project is completed, it is anticipated that the JDC will apply its new found capacity in participatory planning and implementation to additional non-project activities such as locally initiated, line agency, and additional donor-supported development programs. Further details are in Annex 6.

Above the JDC, two committees will oversee and coordinate the project for its duration.

³ IFAD, for example, participated in the February 2004 Bank mission, and has agreed in principle to fund support for the Farmer Advisory Service under the research and demonstration subcomponent.

- Watershed Development Committees (WDC), with raion administration(s) representative(s) and elected representatives from the Jamoats, will approve or reject subproject proposals which require no more than US\$ 5,000, and make recommendations on larger subprojects. Line agency staff will play an advisory role.
- A State level Steering Committee (SLSC), headed by the Deputy Prime Minister and including representatives for line ministries and committees, will be responsible for review and approval of the annual work program and budget, decisions on subprojects requiring more than US\$ 5,000, and coordination of inter-ministerial activities and international linkages. It will also consider policy issues that arise.

Support for secretariat services and project administration will also be provided:

- Project Coordination Units (PCUs) will be established for the project duration in each of the four project areas, with four specialists. The PCUs will provide secretariat support the WDCs, interact with the JDCs and NGO facilitators, foster linkages between JDCs and technical agencies, ensure quality control of subprojects (with expert assistance), organize training programs, and compile progress reports.
- The capacity of the Project Management Unit (PMU) established for the Farm Privatization Support Project and Rural Infrastructure Rehabilitation Project, located in Dushanbe, will be strengthened with additional specialists, associated facilities, and advisory and analytical support. In addition to providing secretariat support to the SLSC, it will prepare the overall project work plans and budgets, update operational manuals, facilitate inter-ministerial coordination, and carry out project administration (e.g., procurement, specialist recruitment, disbursement, accounts, audits, monitoring, evaluation, and reporting). The PMU will establish the PCUs, and its activities will be essential to building the capacity of the JDCs. The Director of the PMU directly reports to the Deputy Prime Minister.

3. Monitoring and evaluation of outcomes/results

The Results Framework is in Annex 3. Monitoring and evaluation will make use of existing data sources, supplemented by data collection within the project and special survey and assessment updates undertaken by contracted specialists. It will include assessment of mountain ecosystem degradation trends (based on satellite and other data) and of project processes used to consider ecosystem issues. The evaluation of outcomes will make use of baseline measurements from poverty assessments, the social assessment, environmental assessment and analysis of satellite data, and biannual updates data from the project monitoring system, special assessments, and data from other sources. The monitoring of outputs will relay mainly based on simple, monthly project monitoring and reporting undertaken by JDCs with the support of NGOs, and aggregated by the PCUs and the PMU. The project also includes arrangements for participatory monitoring by villages and CIGs. A key feature of the system is an emphasis on the use of findings by entities responsible for project management and implementation decisions and oversight.

4. Sustainability and replicability

Institutional sustainability will be addressed through capacity building of the participating rural population, JDCs, and technical support agencies, and relevant line ministries. The project also introduces an appropriate incentive framework for improved land use to enable replication beyond the project area. Financial sustainability and replication within communities is addressed through community managed investments involving full cost recovery arrangements for ongoing O&M, and in the case of the farm productivity investments, through linkages with credit or revolving funds. In later project years, communities will begin to pay for community and

technical services when needed, as part of a strategy to ensure client oriented services and post-project sustainability. Environmental sustainability is addressed through the environment management framework and attention to land and biodiversity management. The project as a whole, and land resource management in particular, establishes a replicable model relevant for other mountain ecosystems. Social and cultural sustainability at the community levels will be addressed by building on existing community institutional structures and ensuring representation of all key groups in participatory decision making.

5. Critical risks and possible controversial aspects

Risks	Risk Mitigation Measures	Risk Rating with Mitigation
<i>To project development objective</i>		
Present institutional capacity not adequate.	Project design includes in-service training to support program during initial years. Gradual phasing in of watersheds over 3 years. Flexible design, to be adjusted during implementation.	H
Farm productivity investments are not viable	Indicative rates of return assessed, proposals screened for viability, and implementation monitored implementation.	M
Households and common interest groups do not take initiative	Project will include information dissemination and training, as well as arrangements to address to address external constraints	L
Government officials force top-down approach and do not allow communities to drive investment choice	Government officials have role in project but project design grounded in government's decentralization policy, with agreements on well-specified participatory processes and facilitation support.	S
Unclear and unresolved land tenure issues are an obstacle to investment and sustainable use practices	Project legal agreement specifies requirement that government registers land use rights, level of funding for farm productivity investments takes into account limited access of households to arable land, and Bank and other donors will continue to address broader land tenure issues under other ongoing programs	M
<i>To component results</i>		
Government does not have sufficient funds to provide counterpart budget	Government counterpart minimized within constraint of standard disbursement percentages (SDPs), requirement for inclusion as budget line item, and ongoing monitoring by Bank of quarterly releases.	H
Lack of household savings precludes required contribution, retained earnings reinvestment, or access revolving funds or credit	Significant portion of contribution provided in form of labor. Project training in cash mobilization skills and opportunities. Beneficiary control creates strong sense of ownership and trust, building willingness to contribute. Training and feasibility criteria foster reinvestment.	S
Arrangements to channel funds to local levels do not function in a timely and transparent manner	Detailed budget and fund flow arrangements specified and applied in ongoing projects, with clear accountability. Project legal agreement will specify financial management system, including fund flow.	S
Overall risk rating		S

[Risk ratings: L <25%; M 25-50%; S 50-75%; H > 75% likelihood]

6. Credit conditions and covenants

Conditions of Project Effectiveness comprise:

- Deposit of an amount of US\$50,000 (fifty thousand dollars) equivalent in local currency in the project account in a local commercial bank, acceptable to IDA to meet the initial requirement of counterpart funds for project implementation;
- SLSC adoption of Operational Manuals outlined in the Project Implementation Plan (see Annex 12)
- The GEF Trust Fund Grant Agreement has been duly executed and delivered, and all conditions related to its effectiveness, or the right of the Borrower to make withdrawals against it, have been fulfilled.

Conditions of Disbursement comprise:

- As a condition of disbursement for the civil works category, submission of the first six month work program and budget for the project to IDA for review and approval, at least one month before the commencement of the proposed civil work program.
- As a condition of disbursement for the fixed term specialists category, PMU to recruit one Environmental Specialist and one Accountant for the CAWMP under TORs satisfactory to the Association.
- Consistent with the phased project rollout, disbursement of the farm productivity, land resource management, and rural infrastructure grants, for a specific watershed will be subject to the creation of the respective JDCs, WDC, PCU, and finalization of the NGO contract pertaining to that watershed.

Other Conditions in the Legal Agreements:

- *Auditing.* The project will adopt *Guidelines for Financial Reporting and Auditing of Projects Financed by the World Bank (June 2003)*. The Borrower will appoint an independent auditor in accordance with International Standards on Auditing (ISA) and a terms of reference acceptable to IDA by December 31, 2004, and the audit will be carried out within six months of the end of the project's fiscal year.
- *Special account.* The Borrower will open and properly maintain separate special account for (i) IDA Credit; (ii) IDA Grant ; and (iii) GEF Grant. In addition open independent special account for each of the Donors financing project activities.
- *Counterpart funds and budget.* A line item will be provided in the annual National Budget beginning 2005 for funds required for implementation of each project component. By September 30 of each year, the Government shall review the provision for counterpart funds and confirm that an adequate allocation for project implementation will be included in the budget for the following calendar year.
- *Management.* The PMU and PCUs would be maintained, adequately staffed, and provided with performance based incentives acceptable to IDA.
- *Monitoring, Review, and Reporting.* Standard reporting covenants will apply; the PMU will report to IDA on a half-yearly basis its monitoring and evaluation reports and the status of the agreed key monitorable indicators; and a project design and implementation review would be undertaken, by IDA in December 2007, to determine the lessons learnt and make appropriate changes, if needed, in the project objectives, scope and components.
- *Rural production component.* Rural production investments will be prepared, cleared, and implemented in accordance with organizational arrangements and operational procedures agreed with the Association. The first ten subproject proposals and associated draft

Memorandum of Understanding between the beneficiary and the JDC for each watershed will be subject to review and clearance by IDA

- *Usufruct for land resource management.* The government shall promptly register land usufruct rights in the name of the groups or households who have preformed in accordance with agreed land resource management subproject parameters
- *Land access restrictions.* No human settlements will be displaced as a result of project activities, and any adverse impacts on vulnerable people of any other restrictions of access to land resulting from project activities will be mitigated by project investments directly benefiting the affected people.
- *Environmental management.* The project shall be implemented in accordance with the agreed environmental management framework and pest management plan.
- *Land degradation status.* The status of land degradation in the project areas shall be monitored in accordance with arrangements agreed with the Bank and the findings made publicly available.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

The project is economically and financially viable. Current yields are extremely low in the project area. Under the project both annual crops and horticulture yields would increase significantly due to improved inputs and supplemental irrigation. Production of fuel-wood, timber and livestock would also increase. Additional benefits would include labor savings and better health from improved water supply, and increased value added from better marketing and processing. At full development, annual incremental gross margins are estimated to increase by about US\$210 per household for farm productivity investments and US\$622 per household for land resource investments, both of which are significant increases above the current household income levels, 97% of which fall below the US\$1125 poverty line. The overall economic internal rate of return (IRR) is estimated at 22%, with a net present value of US\$ 15.4 m. Sensitivity analysis indicates that an ERR below 12 percent would require a decrease in all benefits of 30% together with an increase in recurrent costs of about 30%. Assuming an annual real economic growth rate of 1% without the project, the proportion of project area population above the poverty line is estimated to increase from 3% to 26% by 2011. With the project, the proportion of project participants above the poverty line is estimated to increase to 44% by 2011. The project would also increase the average incomes of those above the poverty line, cushioning their vulnerability. Environmental benefits include not only the productivity gains from improved soil fertility that are already reflected within the quantified analysis, but also area of land saved, prevention of downstream flood damage, and biodiversity preservation. Further analysis is detailed in Annex 9.

The project's net fiscal impact will be positive over the longer term. At prevailing average tax rates the present value of incremental fiscal revenues generated by the project are estimated to be over US\$4.5 m. The project design includes provisions for cost recovery of O&M costs; and the reliance on grant financing and contributions of local people makes the immediate expenditure burden on government small, only US\$0.9 m total over the six years. The post project increase in government O&M is minimal (US\$0.2 m/yr) since communities are responsible for O&M of rural infrastructure. Anticipated net tax revenues of US\$1.5 m per year at full development would more than offset this plus the IDA Credit repayment starting after a 10 year grace period.

GEF financing will catalyze and expand land resource management and other project activities beyond what would be supported by government on purely national grounds. Annex 15 presents the Incremental Cost Analysis associated with GEF financing.

2. Technical

The project promotes a number of low cost, durable, replicable, and cost-effective technologies that are adapted to the conditions prevailing in the project areas to enhance incomes of rural households. For infrastructure works existing national standards are being applied, and the selection of technologies takes into consideration the need to for simple maintenance that can be undertaken by the groups themselves.

The project will build skills of agriculture and environmental institutes and agencies to enable them to provide improved technical guidance and assistance. The project will develop manuals and training services. The project will also include support for improved planting stock and seeds, and improved livestock management, building on local knowledge and technologies as well as international good practice.

No significant technical challenge is expected. Instead, the key issue is the successful dissemination of globally available and tested technologies to remote areas. There is evidence that most of the communities are willing to adopt improved farming technologies, although local technical capacity needs to be strengthened through training and demonstrations.

3. Fiduciary

Financial management. The existing PMU within the Ministry of Agriculture for two current projects, the FPSP and RIRP, will be responsible for financial management and will make use of proven arrangements. An experienced financial management specialist is already working on the preparation activities. The new project will also benefit from the recent installation of the "1C" software program. The FM arrangements will include a simple system for tracking cash receipts and payments at the community level. The Financial Management and Administrative Procedures Manual describes the FM arrangements (staffing, system, reporting format, maintenance of records, controls & segregation of duties, petty cash, auditing, etc.). Training and technical assistance from the PMU and PCU finance staff will be provided to address the capacity limitations at the community level for accounting. Audit expectations of the World Bank are clearly specified. Since Treasury lacks capacity in internal audit, at the time of negotiations, the Bank will obtain from the Borrower, adequate assurance that the trained PMU staff perform internal audits on the financial activities of the JDCs over the life of the project and establish a series of "internal audit-like" procedures in lieu of an Internal Audit (IA) arranged by the Government.

Procurement: The Project Management Unit (PMU) for FPSP and RIRP will have the main responsibility for all procurement except for small items procured at the community level, and for ensuring that even this community procurement meets good practice. The PMU local staff have been well trained in the procurement of goods, works and services for the activities under the other projects and will be continued to assist the proposed CAWMP also. Project Coordination Units (PCUs) along with the NGOs will assist JDCs in procurement activities at the community level. There is a draft procurement manual and a procurement plan for the first year of the project. See Annex 8 for details.

4. Social

Social and political context. 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 remainder make decisions through councils or hamlet-wide discussions. The social survey indicates that women are often excluded from decision making. Jamoat chairmen are appointed by the rayon government, but these appointees and the JDCs use the legitimacy of the mahallas or jamiyats to mobilize local support for government programs and policies. Apart from state and collective farms, local special interest associations are not common except for religious organizations. Households are willing to collaborate in group subprojects by providing labor, but are reluctant to provide in-kind or financial contributions. However, where they are active, donor organizations have been able to overcome this lack of trust in money management.

Social development issues. About 97% of the project population is poor. More than 70% of the project households are very poor. Subsistence agriculture is the most important activity for local people. Although 90% of the people have household plots, more than 80% have less than half a hectare. They also lack seeds and other inputs. Problems in community infrastructure are widespread, creating problems in agriculture production and processing, and other employment income-generation, as well as in health and education. Among such infrastructure, stakeholders often accord household water supply the highest priority. Landslides are an important issue for stakeholders. Health and education are second-tier priorities of project area stakeholders. Annex 17 contains further details on social analysis.

Stakeholder participation. Key stakeholders include community leaders and members, women, rayon and Jamoat officials, technical government and institute staff, NLSC members, and staff of the PCUs and PMU. Stakeholders have been consulted during preparation through informal discussions, formal workshops, and the social assessment. During project implementation local people will take the lead in investment decision making and collective action, although other stakeholders will also play a role. All stakeholders will participate in extensive training and capacity-building activities. The project involves close collaboration with NGOs and other donors.

Consideration of women and other vulnerable people. The procedures for planning and screening rural production investments include consideration of issues faced by women and other vulnerable people, and involve them in decision-making, receipt of a share of project benefits, and associated monitoring. The project does not involve physical displacement of people. There is no encroachment of human settlements in the public lands, and the project will not adversely affect migratory herders in the project area. Possible restrictions of access associated with improved land management activities are not anticipated to adversely affect vulnerable people because those people will be participating in and benefiting from these activities, as well as other rural production investments. The relatively homogeneous social structure of these mountain communities also helps ensure the avoidance of adverse impacts on vulnerable people. Nevertheless, the community planning and clearance procedures will include a few simple questions to consider restrictions of access issues, the biannual impact evaluation will review actual project experience in this regard, and additional mitigation measures will be incorporated in the project if required.

5. Environment

The environmental impact of the proposed project is expected to be largely positive. The rehabilitation of the pasture and degraded fragile lands in the mountain slopes including greater tree and ground cover will enhance soil and moisture conservation efficiency. The reduction in soil erosion losses will also reduce silt loads in the rivers, with a beneficial effect for the down stream area. Biodiversity degradation in these unique mountain ecosystems will be halted, and live specimens of indigenous varieties preserved. Provision of clean potable water in the problem hamlets will reduce waterborne disease incidences. The proposed project does not include any investment in dams or resettlement nor construction of new canals or head works that will increase water abstraction from main sources. It does not involve the construction of new roads. The project area does not include parks or sanctuaries.

The Environmental Assessment (EA) comprises an Environmental Management Framework (EMF) and a Pest Management Plan (PMP). The EMF identifies the procedures for subproject environmental assessment, the roles and responsibilities for implementation, the environmental management guidelines, the environmental monitoring and supervision arrangements, and institutional strengthening steps. Potential adverse impacts such as inappropriate fertilizer or pesticide application, improper food processing waste disposal, or improper animal manure handling will be addressed through guidelines and mitigation measures that protect water supplies, assure population health and safety, and promote sustainable land use. Temporary minor impacts from small works will be addressed through enforcement of proper design standards. The PMP includes provisions of integrated pest management assessment, development, training, and networking as well as replacement of harmful pesticide regimes with environmentally friendly alternatives.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
<u>Environmental Assessment (OP/BP/GP 4.01)</u>	[X]	[]
Natural Habitats (<u>OP/BP 4.04</u>)	[]	[X]
Pest Management (<u>OP 4.09</u>)	[X]	[]
Cultural Property (<u>OPN 11.03</u> , being revised as <u>OP 4.11</u>)	[]	[X]
Involuntary Resettlement (<u>OP/BP 4.12</u>)	[]	[X]
Indigenous Peoples (<u>OD 4.20</u> , being revised as <u>OP 4.10</u>)	[]	[X]
Forests (<u>OP/BP 4.36</u>)	[]	[X]
Safety of Dams (<u>OP/BP 4.37</u>)	[]	[X]
Projects in Disputed Areas (<u>OP/BP/GP 7.60</u>)*	[]	[X]
Projects on International Waterways (<u>OP/BP/GP 7.50</u>)	[]	[X]

The environmental screening category is FI. The Environmental Assessment addresses the environmental issues, including pest management, as described above. The measures are simple to ensure they are within the country's implementation capacity, and will be integrated into the overall operational guidelines and monitoring system. Consultations on the EMF are completed and it was made available to the Info Shop on February 20, 2004 and released within Tajikistan on February 11, 2004.

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

7. Policy Exceptions and Readiness

The conditions of effectiveness, and disbursement address the pending steps necessary to ensure that the project will be ready for implementation. These conditions address issues related to establishment of special accounts, provision of counterpart budget, the procurement plan for the first year, mobilization of staff (PMU project accountant and environmental specialist, Surkhob PCU staff), contracting of the NGO for the Surkhob watershed, establishment of committees (SLSC and Surkhob WDC), and Government approval of the Project Implementation Plan operational manuals (regarding finance, procurement, monitoring and evaluation, community mobilization and rural production investment, and NBFOs). The Environmental Assessment has been publicly released through the Bank and within Tajikistan.

Annex 1: Country and Sector Background

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Poverty

Poverty status. The difficult transition following independence during the 1990s, including a long period of internal civil strife, left Tajikistan among the poorest countries in the world. The GDP in 2000 was estimated to be no more than US\$ 154 per capita, while the UNDP Human Development Index ranked Tajikistan 110 out of 174 countries. According to the Bank's Poverty Assessment, some 83% of the present estimated population of 6.3 m are living in poverty, while about 50% are very poor or extremely poor. Less than half of all households have access to piped water, 75% have no source of hot water, 85% rely on an outside latrine. However, with the cessation of violence and a resumption of economic growth since 1997, there is now a real possibility to contribute to the alleviation of poverty in the country. Still, even with sustained GDP growth rates of 5%, it is estimated that around 15 years would be required to reach pre-independence levels.

Poverty in mountain areas. Poverty is generally considered worse in rural areas than in urban areas. This finding is supported by the results of the Tajikistan Living Standards Survey conducted in spring 1999. An FAO Crop Assessment mission also identified the mountainous districts as some of the worst affected and most vulnerable to drought. In mountainous areas, agriculture plays a vital socio-economic role in the livelihoods of the population and since the collapse of the limited local industry, it has often become the only means for survival. Although, today the agriculture sector makes up only around 24% of GDP (in 2001), more than two-thirds of the labor force remains employed in agriculture. Poverty in mountainous areas is caused by a number of problems including, uneven and inequitable access to land, breakdown of irrigation and drainage systems, lack of rural finance, deteriorating social infrastructure, poor accessibility due to poor road conditions, lack of communications, and sheer remoteness from urban markets. The most important survival strategies of local residents is production on their small household garden plots of an area of approximately 0.15ha, livestock ownership, and in many cases, migration of some family members to Russia in search of work.

Mountain Issues

Erosion. Tajikistan's mountains are relatively recent geological formations. The soil structures are generally loose and highly prone to erosion which is reflected by deep gullies throughout the hill and mountain sides in the areas. Recent surveys of soils, pastures, forests and biodiversity suggest that the lands in the selected watersheds are affected by all types of erosion to a various degree.

Changes in tree cover. Under the Soviet Union, some attempts had been made to protect crucial infrastructure such as roads by afforesting a number of hillsides with fast growing tree species and bushes. In the mid-altitude mountains there are some natural forests remaining, but just as with the planted areas, these small forests have been largely depleted by illegal cutting following the collapse of the former subsidy system and the civil war. Firewood has become an extremely important commodity in mountain areas to replace the former seasonal coal quotas that had been provided to each household for heating and cooking. To some extent electricity has filled this

gap, but in winter, electricity production is scarce due to the need to recharge dam reservoirs for the summer irrigation season.

Cultivation of sloping land. The advanced agricultural development practices of the Soviet era focused on the irrigated valleys for cotton production, and in the mountain areas on growing of large scale fruit and nut trees orchards, especially apple, peach, apricots, cherries, and walnut, almonds. Viticulture was also widely practiced for table grapes but also for dry raisin that used to be exported to Russia and some local vine production. Since independence, largely as a consequence of the collapse of the Soviet enforced production regimen where Tajikistan was specialized in cotton and orchard fruit production, grain production has gained momentum, and in mountain areas potatoes have become the crop of choice. Unfortunately, there is a lack of information at the farm level especially in the mountain areas in regards of modern crop and land management techniques. In the absence of understanding and knowledge, emerging new dekhkan farmers generally tend to adopt low-risk extensive agricultural practices which force them to use ever greater areas for cultivation while outputs are dwindling. This has led to increased cultivation of cereal crops on steep hillsides leading to erosion and destroying scarce and fragile top soils that are necessary for sustainable agriculture in the mountain areas. Encroachment and cultivation of steep mountain slopes has resulted in increased erosion problems since much of the mountain areas are composed of a very unstable and brittle soil susceptible to collapse following rain and snow. The Ministry of Nature Protection estimates that the cultivated land area has recently increased by 40 to 45 000 ha because of removal of trees and cultivating of steep lands sometimes with devastating results.

Changes in grazing. Another angle that affects land deterioration is the collapse of the former grazing agreements that were signed between the regions in the valleys and the mountains. Under these agreements, livestock was brought by truck from the valleys for summer grazing, and then during the winter the livestock farms in the mountains had access to winter pastures in the valley. With the collapse of the state farms, increased transportation cost due to the shortage of vehicles and deteriorating roads, this exchange does not take place anymore. Most livestock is now held in private hands, by almost all households and grazing has become a haphazard affair that sometimes is organized by the Jamoat, sometimes villagers, and often not at all. In spite of smaller livestock numbers, the lack of organized grazing and lack of responsibility for sustaining pasture lands has lead to significant overgrazing in areas around settlements, which is compounding the erosion from hillside cultivation. Unsurprisingly, over the past couple springs there have been devastating mudslides during thunderstorms burying several houses of villagers, destroying roads and cutting off drinking water supply lines and irrigation canals.

Pasture maintenance responsibilities. An important aspect that needs to be addressed is to tie the responsibility for maintenance of the pastures with its users. In their present unclear ownership situation, where formally the pastures are the ownership of the Jamoat, no reseeding, or fertilizing, or rotation is taking place. Villagers collect the dung mostly for heat, they have little interest in leaving manure for fertilization, or take the pain to go farther away from the village to maintain sustainable grazing patterns, on an asset in which they have little or no stake. The project therefore would provide for issuing to user groups usufruct rights to land that has been managed in accordance with an agreed plan. These rights would be documented by with corresponding land certificates and maps of parcels registered with the State Land Committee as undertaken under the Bank's FPSP.

Land degradation impacts. The consequence of this deforestation has been a loss of top soil through landslides and mudflows especially in the spring when the soils defrost and with abundant rains. The loss of topsoil is dramatic since the denuded areas lose most vegetative cover and their use, even for pasture, is lost. In addition, the soils that erode away contribute to very heavy silting of the stream and rivers, filling riverbeds and rendering the course of the stream unpredictable. The Surkhob and the Zarafshan rivers in some areas have eroded away significant portions of highly fertile land plateau at the valley bottom displacing farmers to cultivate increasingly on hillsides thus further contributing to the problem. The loss of precious arable river bed land is only one aspect of the problem, further down the valley the heavy silt loads clog up waterways and fill up dams, as well as irrigation structures greatly reducing the life of power generation facilities as well as dramatically increasing the costs of maintaining water management structures such as irrigation canals as well as drinking water systems in Tajikistan but also all the neighboring countries in the Aral Sea basin, that are dependent upon Tajikistan's water for irrigation and drinking purposes.

Importance of mountain biodiversity. An additional important issue is that these valleys of Tajikistan, are some of the richest in the world for basic genetic material for several types of important food and fodder crops such as wheat and grasses and a number of fruit and nut trees. The poor land use practices currently applied in these areas, represent a serious threat to these species. Although governmental institutions and programs exist to maintain and sample this material, they are in great difficulty due to lack of financial resources that were cut along with the rest of the government's budget. Some collaboration has taken place with the CGIAR in this context, but investments are needed to rehabilitate the facilities of these institutions and programs to permit them to fully assume their role as keepers of Tajikistan's genetic plant wealth.

Sustainable land use options. To ensure the sustainability of mountain farming, as well as to ensure efficient and reliable supply of water for irrigation for agriculture in the valleys, it is crucial that land degradation is stopped, erosion through run-offs, land and mud slides, are reduced, and a vegetative cover be maintained on agricultural land in the mountain areas. This is only possible with the introduction of more modern, efficient, and sustainable cultivation and livestock husbandry models. These will include an intensifying of the use of arable land on the valley floors and foot hills, and a more extensive agriculture in the steep high mountain areas with a diversification of crops and "no-till" cultivation techniques. In addition to providing immediate benefits to the farmers themselves, this will also ensure that the pressure on more sensitive areas is reduced and rarer species affected by the intense cultivation will be able to recover and thrive. In Tajikistan, this link between improving productivity and thus incomes will be the only way for ensuring economic and environmental sustainability in these mountain areas.

Agriculture

Agricultural importance and potential. Agriculture plays a vital socio-economic role in the economy and the lives of the majority of the population. More than two-thirds of the labor force is directly employed in agriculture. However, agricultural productivity is very low as a result of deterioration of rural infrastructure, largely inefficient and unsustainable land use with ongoing official state directed cropping plans, and ineffective processing and marketing infrastructure for the most important crops, and a general lack of any agricultural support services nor credit. Rural poverty is widespread but extreme in remote and largely inaccessible mountainous areas that depend largely on subsistence rainfed agriculture. It is widely accepted that given the

abundant water resources and climatic conditions, the agriculture sector could provide significant labor intensive economic growth and be a major contributor to poverty reduction. To come closer to its true potential, however, the following five key issues need to be addressed: (i) improved access to land, which would include provision of a more transparent land use right, more equitable and inclusive distribution of land to all rural dwellers and better information flows including tax policies and land tenure rights; (ii) the introduction of improved technologies and market oriented farming systems with emphasis on efficient crop and livestock management; (iii) the introduction of effective applied research, advisory and extension and other support services for the promotion of effective and sustainable farm management; and (iv) rehabilitation of rural infrastructure where economically feasible; and lastly (vi) improving access to rural finance, including community savings and credit schemes to monetize the rural economy, stimulate local markets, and help in facilitating rural trade.

Management of sloping land. Agriculture could greatly benefit from maximizing the productivity of the large tracts of pre-alpine pasture land. While in general, soil conservation is not a major priority for most of the rural communities. Villagers are generally well-aware of the problems from gullying and landslips, and the erosion problems that have arisen from cutting down trees, overgrazing in areas around the villages, loss of carrying capacity of pastures, and dwindling yield levels of crops cultivated on steep slopes. It is considered that the most effective soil conservation methods often include indirect methods such as conserving soil and moisture by providing vegetative covers, contour cultivation, strip cropping, planting woodlots, adoption of farming systems to enhance flora and fauna activities by enhancing the organic matter content of “A” horizon of the soil profile, and increasing productivity from efficient management of the rainfed and irrigated arable land. Other methods include those that combine some income generation combining soil and moisture conservation benefits, such as planting economically useful trees such as walnuts, cherries or apples around rainfed arable land. Accordingly, the project will not be limited to soil conservation through physical activities *per se*, but rather focus specifically on moisture conservation approach for sustainable income-generating activities that would have indirect long-term benefits on resource preservation and conservation.

Improving tree cover. As part of the restoration of the stability of sloped lands, efforts therefore need to be made in the areas which had reportedly good tree coverage in the past, but are now denuded. On steeply sloping agricultural land, tree-planting activities would particularly focus on trees of economic value such as walnuts, pistachios, or almonds with some planting of non-commercial trees to limit further gullying in appropriate areas. Currently, no replanting activities or improved management approach is being considered by State Forestry Committee (SFC) due to budget constraints and because it is understood that the SFC has responsibility primarily for state forest land only and not on community forestry activities. In the future, it will be essential that SFC involve the communities in the forest conservation approach of the SFC. Establishing successful experience of community-based tree replanting outside of official forest lands will hopefully help convince the SFC to adopt more participatory approaches that consider incentive frameworks including usufruct tenure.

Rural Infrastructure

Water management and irrigation: The broad policy objectives of the water and irrigation sector are to manage the country’s water resources to ensure efficient, safe, and ecologically sound water usage, and to meet its international obligations regarding the management of water resources of the Central Asia Region. Tajikistan already has a national water strategy, which

was developed with the support of the GEF financed Water and Environmental Management Project for Central Asia. The Bank financed FPSP is now providing support for the development of a national water code that will encompass all aspects of water use, its extraction, and release back into the system. This code allows formation of Water Users' Associations (WUAs) and the Government is also taking initiatives to increase water charges to recover operation and maintenance costs. However, these reforms will take time to implement, and, apart from the introduction of water charges, few changes have taken place at field level. Irrigation is a key input into the agricultural sector and economy, and has been critical in maintaining crop production. The irrigation and drainage systems have seriously deteriorated since the break-up of the Soviet Union, resulting in a good deal of irrigated land lost to production. Highland irrigation systems are generally much smaller, supplemental systems. The project will help irrigation in the lowlands by halting further degradation of the watersheds, and by providing funding under the rural infrastructure subcomponent for cost-effective rehabilitation of small irrigation systems that are of high priority to communities.

Rural water supplies: By the end of the 1980s, only about 20 percent of the rural population had been served with clean domestic water supplies, treated with chlorine but many are now in poor condition, exacerbated by erratic electricity supplies. The remainder of the population obtain their water supply from untreated canals, rivers, local streams, or tube-wells, often contaminated by sewage and agricultural chemicals. Furthermore even the existing soviet systems are no longer being adequately maintained. Considerable damage was caused to water supply systems during the civil war, notably in the mountainous regions of the Surkhob valley.

Rural electricity supplies: The energy sector is dominated by hydro-electricity, which accounts for more than 99 per cent of energy production. There is little use of other fuels, and, as a result, Tajikistan is a large net importer of oil and natural gas. Over the summer months there is an electric power surplus of 2,500 GWh⁴ and a net deficit of 1,200 GWh during winter months. The current highly subsidized power supplies are unsustainable, and there are plans to substantially raise electricity tariffs in 2005. Transmission networks under 10kV are in generally poor condition. Since 1990 due to poor supply coal and petrochemicals, there has been a major shift to electricity based domestic heating and cooking. The situation is especially critical during the winter months (November to March) when the electricity system becomes severely overloaded (by as much as 150 percent). In order to conserve and regulate supplies, power is rationed to a few hours each day during winter. Most local circuit breakers and fuses are no longer working, and many transformers have been damaged. In remote communities in mountainous areas, there is considerable potential to develop small hydro electric units (4-100 kW).

Rural roads: Many roads and bridges show signs of deterioration due to the cumulative effect of neglected maintenance over recent years. Mountain roads are frequently blocked by mudflows during the flood season, and the high seismic activity of the region provokes rock falls, and mud-landslides. A considerable proportion of the Ministry of Transport's resources are used to keep roads open in mountain areas. Moreover, spring floods regularly cause extensive damage, especially in mountainous areas. It is estimated that some 25 percent of paved roads require reconstruction, and a further 50 percent require some rehabilitation. The figures are much higher for the lower order rural roads.

⁴ 1 Giga Watt hour = 1 Watt hour x 10⁹.

Land Tenure

Legal frame work: According to the Constitution of land is the exclusive property of the state. But the right to use the land can be privatized. The land use right can be conferred on individual, men and women equally and are granted for life and are inheritable. Land can be rented by the land use right holder as long as land taxes are paid. However, land use rights cannot be sold or purchased. Although the right to buy and sell land rights is fundamental to a market in land, it is still not allowed. The issue is under debate. The primary focus on land reform programs of the Bank has been on arable farmland, and particularly the land held by sovkhozes and kolkhozes in the soviet period.

Tenure Reform. Country wide, official land reform information indicates that use rights on as much as 55% of all arable land is now privatized and has been converted into lease farms, joint stock companies and Dekhan (private family) farms. Most state and collective farms in cotton growing areas, except pedigree seed farms, have been converted into joint stock companies or associations, but without major change in the mode of operation, and in the majority of cases, farmers are still not free to make their own management decisions. It is estimated that there are now some 13 000 Dekhan (private family) farms covering some 350,000 ha including some 30,000 of irrigated land throughout the Republic. Highlands have experienced relatively more progress with meaningful farm privatization, but in these areas farmers lack the capacity needed to exploit the productive potential of their land. Furthermore, in hilly and mountain areas, there are large tracts of pasture lands, formerly under control of the state farms, which are now under the control of the Jamoats. This is particularly important since access to these lands can be very arbitrary, mostly at the whim of the local government officials. In general, the land privatization process adopted prior to the Bank's involvement has resulted in substantial inequalities among households in the selected project areas. Tackling land privatization requires widespread information dissemination of reform initiatives and rights, the adoption of transparent procedures for land and asset allocation adopting a "bottom up" approach at the raion, Jamoat and village level and comprehensive information services to increase people's awareness in all aspects of the land privatization, user rights and farm restructuring process. This is especially important since, many households consider that shortage of land other than their household plots as a major contributor to poverty.

Bank support for farm privatization. The Bank has taken a lead role in promoting privatization in Tajikistan through its Farm Privatization Support Project (FPSP) since 1999. The project has supported ten pilot state and collective farms representing different agro-climatic and socio-economic zones of the country, a land distribution which is driven by choice, and is bottom-up in principle. It is putting to effect the government's stated commitment to transparency, fairness, equity and justice in the distribution of land shares to the workers of the state and collective farms, and issue of land use right certificates of the land parcels distributed to them. To bolster this initiative and expand the reach of the privatization drive, under Structural Adjustment Credit II, another 70 farms are being privatized using the methods applied under the FPSP. The Bank may further engage in future lending operations focused on land reform issues. In the meantime, the Community Agriculture and Watershed Management Project would build on this experience by tackling the tenure issue on highland pasture lands, where common property issues have to be taken into consideration in view of the fact that these lands provide important public environmental services.

Governance Structure

Formal administrative structure. Tajikistan has a three tier territorial administration that is a mirror image of the Soviet administrative system of Oblasts (provincial level), Raions (district level) and local government called the Jamoat (subdistrict and lowest formal tier). In Tajikistan's case what is unusual is that large cities are not under raions subordination but rather they are directly reporting to central government. Tajikistan's government is pursuing a policy of decentralization, its shape, and the responsibilities of the various levels of government however have so far only been broadly described in the constitution. However, clear legislation describing roles and responsibilities, and funding thereof, at various government levels is only slowly emerging.

Line agencies. Central government's technical services are de-concentrated down to level of the raion where raion administration is supported by specialists of the various ministries. In the mountain areas, these include mostly the Ministry of Agriculture, State Land Committee, State Committee for Environment Protection, Ministry of Irrigation and Water Resources, and typically, at least in the large raion offices, there are also representatives from the ministries of, Education, Health, Culture, Communications & Transport, Energy, Public order and Security. The various Ministries have all suffered from the dramatic budget cuts that have come along with independence, enough for covering salaries but with little operating budget to fulfill their mandate at the local level.

Research agencies. Sector or activity specific research activities are typically led by one or more of the various institutes under the Academy of Sciences especially in relation to basic sciences. Applied science is usually guided under a sector specific academy such as the Agricultural academy that has a whole host of institutes that are assigned specific applied sciences such as, the soil sciences institute, or the Horticultural Research Center. The Academies are direct budgeted institutions under the central government. As a consequence of the radical budget cuts that took place since independence, however these institutions in some cases are little more than empty shells apart from some qualified staff. Budgets barely cover salaries of staff and little money is available to undertake any relevant research program.

Traditional local institutions. Below the formal government structure, there are older structures at the village and community level, most notably the Mohalla that could be compared to a village council and is often looked at as the most representative local government body. These bodies have significant informal power and in many cases provide the forum in which issues affecting the community are discussed and often decided. Mohallas often take an active role in organizing community contributions towards rehabilitating or introducing a service to the community. The Aqsakal is another informal but significant body, especially in larger settlement where "the council of elders" intervenes to settle disputes affecting the peaceful co-existence of villagers. They may intervene on issues surrounding water use, pasture access or any other situation where a neutral opinion is needed.

Government Policies

Local Government. The Government also has adopted new policies regarding local government planning and management systems. The stated principles of recent legislations are geared towards (a) introducing mechanisms to enable people to be better informed and to participate more fully in local decision-making processes, and (b) to support the renovation process through the improvement of policies and administrative procedures. However, these government policies

do not yet have clear follow up directives that outline the practical actions and steps that should be taken by local authorities to achieve these policies. The Urban Institute, an international NGO, is advising the government on potential next steps. From discussions with some Hukumats and Jamoats, local governments are aware of the new policies but in spite of the local governance policies targeting rural areas, resources remain too small to effectively respond. Some local representatives have begun to address the problems by using consultative mechanisms with the population to try to identify and address problems themselves.

Jamoat Development Committees. The UNDP's past Rural Reconstruction and Development Program have provided, and its ongoing Communities Program provide field level support to local governance in the form of establishing Jamoat Development Committees (JDCs). The role of the JDC is to coordinate resources coming into the sub-district and to ensure wide distribution between the many groups operating at the village level. Accordingly, JDCs usually have an account management committee (with a paid accountant/bookkeeper) which provides oversight for the JDC expenditures and revolving funds. Some JDCs also have tender committees and women's centers. [The JDC tender committees would not play a major role in the project, since the common interest groups and households would handle most of their own procurement directly.] The JDC interacts with raion officials and the raion development council. The intention is to integrate JDCs into official Jamoat level government structures in due course, thus providing the foundation of well functioning Jamoat councils, although the time frame for this development is not clear at this time. JDCs and similar initiatives are now spreading in the highlands of rural Tajikistan, and in project areas other than Surkhob, the project will build on these organizations and associated lessons learned.

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies
TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Project Name	ID	US\$ Million	Intitution	Approval
<u>Pamir Private Power Project</u>	P075256	10	IBRD/IDA	27-JUN-2002
<u>Dushanbe Water Supply Project</u>	P057883	17	IBRD/IDA	18-JUN-2002
<u>Poverty Alleviation Project (02)</u>	P008860	13.8	IBRD/IDA	21-MAY-2002
<u>Structural Adjustment Credit Project (02)</u>	P046047	50	IBRD/IDA	26-JUN-2001
<u>Emergency Drought Assistance Supplemental Project</u>	P072760	3.1	IBRD/IDA	22-FEB-2001
<u>Rural Infrastructure Rehabilitation Project</u>	P058898	20	IBRD/IDA	22-JUN-2000
<u>Institution Building Technical Assistance Credit Project (02)</u>	P059755	6.7	IBRD/IDA	17-JUN-1999
<u>Farm Privatization Support Project</u>	P049718	20	IBRD/IDA	10-JUN-1999
<u>Education Modernization Project</u>	P069055	20	IBRD/IDA	15-MAY-2003
Small Enterprise Fund – Farmer Owned Model			IFC-SECO	
Postconflict Infrastructure Program	1651	20	ADB	10-Dec.1998
Emergency Flood Rehabilitation	1714	5	ADB	02-Dec.1999
Rural Reconstruction and Development Program Phase I		26	UNDP/UNOP	1996
Rural Reconstruction and Development Program Phase II		16.3	UNDP/UNOP	November 2001
Central Asian Mountain Program (e.g. WOCAT, Dom Gor, Dom Vody)		3.0	SDC	01-Jan.2000
Regional Development of Muminabad District (SDC funded)		1.1	Caritas	Ongoing
Village Organizing, Education, and Public Health (SDC funded)		3.7	AKF	On-going
Improving Rural Livelihoods		2.4	AKF	On-going
Private Farmers Support Project (USAID funded)		0.6	CARE	01-Sep.-1996
Community Action Investment Program (USAID funded)		9,,8	AKF/MCI/UNDP	July 2001
Peaceful Communities Initiative (USAID funded)		2.1	MCI	September 2001
Local Government Initiative Phase II (USAID funded)			Urban Institute	September 2002
Pamiri High Mountain Integrated Project (UNESCO funded)		2.4	ACTED	July 2002
Seed & Fertilizer Agricultural Rehabilitation Project (EC funded)		3.3	GAA	September, – 1999
In-Situ Conservation of Agricultural Biodiversity in Central Asia (GEF-financed, preparation phase)		0.35	UNEP	May 2003
In-Situ Conservation of Kazakhstan's Mountain Biodiversity (GEF-financed)		3.0	UNDP	February 2002

Annex 3: Results Framework and Monitoring
TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Results Framework

PDO	Outcome Indicators	Use of Outcome Information
<p>Build the productive assets of rural communities in selected mountain watersheds, in ways which sustainably increase productivity and curtail degradation of fragile lands and ecosystems</p> <p>GEF Objective: Protect globally important ecosystems by mainstreaming sustainable land use and biodiversity conservation considerations within agriculture and associated rural investments decisions, providing replicable models for comparable areas throughout the country</p>	<p>At least 80% of rural production investments are successful according to agreed standards⁵ and are being sustained.</p> <p>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</p> <p>In communities that are participating in project, proportion of people above poverty level increased from 3% to at least 30%</p> <p>Negative trends of land and mountain ecosystem degradation halted in project area Jamoats⁶</p>	<p>Gauge realism of proposals and effectiveness of selection processes and support, and adjust project design if necessary</p> <p>Gauge scale of coverage and extent of changes in poverty levels, and watershed degradation associated with project activities in order to demonstrate impact and to inform plans for extension of program to additional households and in remaining highland areas.</p>

⁵ Taking into account economic, financial, social, and environment parameters, and weighted by value of investment

⁶ A detailed explanation of the indicators that are most relevant to GEF is provided on page 30 at the end of this Annex. These indicators include: reversal of land and mountain ecosystem degradation; ha. of land managed sustainably; and number of live specimens preserved.

Intermediate Results One per Component	Results Indicators for Each Component	Use of Results Monitoring
Component IA: Investment in farm productivity among project participants (from initial financing, local contributions, and subsequent financing rounds from revolving funds) exceeds projection of capital infusion from project.	Component IA: Total value of farm productivity investments to date	Component IA: YR2-YR6: Low levels may flag low participation, social or environmental problems, low commercial viability, low repayment rates, low reuse of revolving funds, or unrealistic expectations
Component IB: Land resource management subprojects cover a significant area and benefit very poor	Component IB : Area covered by land resource management subprojects, and beneficiaries are very poor at least in proportionate to their numbers in a community	Component IB: YR2-YR6: Low levels may flag low participation, problems in certificate issuance, elite capture, or unrealistic expectations.
Component IC: Significant number of public facilities improved (although target numbers not appropriate due to CDD approach).	Component IC: Number of improved public facilities, disaggregated by type of investment (village drinking water, roads, and electricity, etc.).	Component IC: YR2-YR6: Numbers should indicate community priorities and capacity to plan, select, implement, and maintain facilities
Component IIA Project participants have access to and adopt improved agricultural technologies	Component IIA % of project-financed farm productivity and land management investments applying improved technologies, and receiving good access to necessary inputs and knowledge.	Component IIA YR2-YR6: Low adoption rate may flag that sources of appropriate seeds, seedlings, livestock breeds, other inputs, pest and disease management support, soil conservation techniques, and associated technical services and knowledge are not established or are not accessible to project participants
Indigenous crop varieties preserved	Number of varieties preserved as live specimens	Numbers indicate this GEF supported activity is functioning
Component IIB JDCs overseeing implementation of rural production subprojects	Component IIB Number of JDCs that are overseeing implementation of rural production subprojects	Component IIB B YR1-YR3:(# of JDCs reviewing proposals), and YR2-YR6 (# of JDCs reviewing action plans implementation) indicate effectiveness of training and facilitation support from contracted NGOs and PCU/PMU, as well as functioning of WDCs and SLSC.
Component III Project administration is satisfactory and project has reputation for integrity	Component III Bank supervision ratings and reputation for integrity as perceived in public opinion surveys	Component III YR1-YR6: Flags managerial, coordination, or communication problems

Arrangements for results monitoring

Outcome Indicators	Baseline	Target Values						Data Collection and Reporting		
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
% of rural production investments are successful according to agreed standards ⁷ and are being sustained.	NA	-	-	60%	-	-	80%	Periodic report on cumulative investments that have been completed	Independent evaluation based on sample study and review of project records	Specialist team contracted by PMU and reporting to SLSC
Number of households participating in some part of the rural production component	0	300	1900	4400	14,000	23,000	32,000	Quarterly reports with data ⁸	Project records	Collected by JDCs with NGO support, and aggregated by PCUs and PMU
Proportion of population above poverty level in villages that are participating in project	3%	-	5%	-	15%	-	30%	Biannual report	Independent evaluation based on sample study of participating villages	Specialist team contracted by PMU and reporting to SLSC
Negative trends of land and mountain ecosystem degradation halted in project area Jomoats	YR1: Past 10 year trends analyzed	Base-line	-	-	Degradation trends halted	-	Restoration evident	Periodic report	Satellite data on vegetative cover in project area, ⁹	Specialist team contracted by PMU and reporting to SLSC

Results Indicators for Each Component										
Component 1A : Total value in US\$ m of farm production investments (regardless of financing source) to date in villages where project is operational	NA	-	0.2	0.6	1.5	2.6	3.8	Quarterly reports	Project records	Collected by JDCs with NGO support, and aggregated by PCUs and PMU

⁷ Taking into account economic, financial, social, and environment parameters, and weighted by value of investment

⁸ Disaggregated by investment type, value, and location

⁹ Supported by sample ground survey data, data on landslide incidence, and community anecdotes

Results Indicators for Each Component													
Component IB : Area in ha covered by land resource management subprojects and benefiting very poor at least in proportionate to their numbers in a community	NA		4,500				35,000			78,000	Quarterly reports	Project records	Collected by JDCs with NGO support, and aggregated by PCUs and PMU
Component IC: Number of improved public facilities, disaggregated by type of investment (village drinking water, roads, and electricity).	NA	*	*	*	*	*	*	*	*	*	Quarterly reports	Project records	Collected by JDCs with NGO support, and aggregated by PCUs and PMU
Component IIA % of project financed farm production and land management investments applying improved technologies, and receiving good access to necessary inputs and knowledge.	NA		5	10	20	30	40				Quarterly reports	Project records	PMU, in collaboration with input and service providers
Number of varieties preserved as live specimens	NA	*	*	*	*	*	*	*	*	*			
Component IIB Number of JDCs that are overseeing implementation of rural production subprojects	NA		19	37	45	45	45			45	Quarterly reports	Project records	Collected by PCUs and aggregated by PMU
Component III Bank supervision ratings	NA	S	S	S	S	S	S	S	S	S	Semi-annual reports	Bank supervision mission review of project	Bank task team
Reputation for integrity as perceived in public opinion surveys	NA	-	S	-	S	-	S	-	S	S	Biannual survey	Public opinion survey of project stakeholders	Specialist team contracted by PMU and reporting to SLSC

*=target not appropriate but numbers will be monitored S=satisfactory rating

Further Explanation of Indicators Most Relevant to GEF

The result indicators most relevant to the GEF supported activities include the following:

- Land and mountain ecosystem degradation trends halted in the project area jamoats
- Land resource management investments cover 78,000 ha
- Number of indigenous crop varieties from project area preserved as live specimens.

Degradation trends. As Annex 1 makes clear, it is evident that within the project areas, the amount of degraded land has increased significantly during the past decade. A baseline study during the first year of the project using satellite imagery and ground surveys will further measure the number of hectares in the project areas affected by significant degradation over the past decade, thus documenting the negative trend more precisely. By year four the project target is that within the jamoats that have had project activities, there will be no further increase in the area of land being converted to inappropriate use and thus subject to degradation. In other words the negative trend of more and more land being subject to degradation will be *halted*. By year six it is expected this assessment will provide independent evidence that a portion of the formerly degraded land has been rehabilitated, i.e., evidence that the trend will have begun to be *reversed*. The project includes support for this baseline assessment, and for follow-up assessments in years 4 and 6. This study will use a generic, international accepted, cost-effective rapid survey protocol to assess and monitor agricultural and related landscape biodiversity conditions. It will use this analysis to reveal consistent, significant statistical relationships between a minimum set of plant-based variables and key groups of below and above-ground fauna, soil nutrients, soil texture, above-ground carbon, and land use production potential. The study is likely to involve purchase of satellite images, training of local experts, data processing and ground-truthing, consultations between experts and stakeholders, and other activities involving international and local specialists (land use, biodiversity, botany, ornithology, mamology, soil, and hydrology).

Area covered by land resource management investments. It is expected that some 4500 ha of land will be covered by project-financed land resource management investments by the end of the second year, a cumulative total of 35,000 ha by the end of year 4, and 78,000 ha by project completion. The 78,000 ha represents about 10% of the total pasture area in the project area jamoats. Annex 4 describes the nature of these investments, which involve rehabilitating degraded sloping land that has been used for cereal crops, subject to localized overgrazing, or other poor land management practices by supporting investments such as contour planting of economically beneficial trees with associated soil and moisture conservation structures, or pasture improvement. Regular progress reporting will include the collection and aggregation of data on the number of hectares subject to the land resource management investments, and the status of subproject implementation. The project eligibility and feasibility guidelines include a range of considerations, including those that relate to sustainable land management and biodiversity, for the subproject proposals and for the review of these proposals by the JDCs, WDCs, and SLSC. The Environmental Management Framework also addresses environmental factors, including global ones. It specifies arrangements for environmental review. An independent evaluation, the Review of Subproject Results, to be carried out in project years 3 and 6, will assess the success and sustainability of project-financed subprojects based on a sample survey. In this evaluation, the parameters of success will include environmental factors. The project also provides for participatory monitoring by groups undertaking the subprojects, and this will include consideration of sustainable land management and biodiversity.

Number of crop varieties preserved as live specimens. Regular progress reporting will also include collection and aggregation of data on the number of crop varieties preserved as live specimens. The project will strengthen the capacity of local institutes to preserve live specimens of wild fruit crops and wild nuts and other plant species and landraces, and improve the access of the international applied research community to these specimens and associated knowledge. Annex 4 provides a more detailed description of this project support, which is an element of the Research and Demonstration Subcomponent.

Relevance of other indicators to GEF. Many of the other indicators of the Results Framework also relate to factors of important to GEF, such as sustainability, stakeholder involvement, and project management. For example, at the outcome level, by project closing, it is estimated that at least 80% of the rural production subprojects will be successful taking into account economic, financial, social and environmental parameters, as measured by an independent evaluation in years 3 and 6. At least 50% of the project area population should directly benefit from subprojects as measured from internal progress reporting and further verified by independent evaluations. Expected component results include successful project administration as assessed by donors, and a reputation for integrity as assessment by public opinion surveys. The Results Framework is also backed by a wealth of more detailed data and assessment of interest to GEF as well. For example, the project provides support for updating the social assessment in years 2, 4 and 6, which will include review of the inclusion of women in village decision making.

Annex 4: Detailed Project Description

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Project Areas

The project would take place in four highland watersheds covering catchments of over 36,000 km², with agricultural areas covering about 690,000 ha, with a population of about 550,000 people (42% of Tajikistan's mountain population). Most of the project activities will take place in hilly and mountain areas above 750 meters. The proposed project areas in the Surkhob, Vanj, Zarafshan, and Toirsu river valleys suffer from a number of constraints at the bio-physical level, mostly related to climatic variations, soil erosion and poor water quality. In addition, there is no concerted effort to manage the natural resources in the areas. Each watershed encompasses a number of administrative districts or raions and a number of Jamoats, the smallest administrative unit in Tajikistan consisting of a cluster of villages. The total rural population of the project area, estimated at 550 thousand people, comprises little short of ninety three thousand households. This implies an average household size of nearly 6.2. The population, number of households, administrative units and types of farms for each area are presented in Table 1.

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

<i>River basin</i>	<i>Raion</i>	<i>No of Jamoats</i>	<i>No of villages</i>	<i>Rural population ('000)</i>	<i>No of rural households</i>	<i>No of dekhan and cooperative farms</i>	<i>No of kolkhozes and sovkhoses</i>
Surkhob Valley	Darband (30%)	2	26	16.0	2,133	11	5
	Jirgital	9	49	51.6	10,072	143	12
	Rasht	12	117	80.6	12,515	263	4
	Tajikibad	4	43	32.0	5,107	197	11
Vanj Valley	Vanj	6	57	28.3	28.55	19	2
Zarafshan Valley	Aini	8	62	77.4	15,411	31	3
	Matcha	2	30	12.0	2,628	14	12
	Pendjikent	14	134	170.3	34,048	59	13
Toirsu Valley	Danghara	8	75	81.7	11,059	120	10
Total	9	64	593	549.9	93,002	857	72

Number of households for Vanj Valley have been estimated using regional family size averages

The project has sufficient financing to cover 47 of the 64 Jamoats in these watersheds, and would expand to the remaining Jamoats if additional financing from other donors becomes available, as anticipated, after project inception. Project activities and funding would be distributed relatively evenly within the 47 Jamoats, and directly benefit at least half their population.

Table 2: Administrative Units, Population, Number of Households and Types of Farms to be Covered by the Project, Based on Financing Available at Project Inception

River basin	Raion	No of Jamoats	No of villages	Rural population ('000)	No of rural households	No of dekhans and cooperative farms	No of kolkhozes and sovkhoses
Surkhob Valley	Darband (30%)	2	26	16	2,133	11	5
	Jirgital	9	49	51.6	10,072	143	12
	Rasht	4	42	10.2	1,596	263	4
	Tajikibad	4	43	32	5,107	197	11
Vanj Valley	Vanj	4	42	21.6	18.95	19	2
Zarafshan Valley	Aini	6	38	58.5	11,647	31	3
	Matcha	2	30	12	2,628	14	12
	Pendjikent	10	82	104.8	20,990	59	13
Toirsu Valley	Danghara	6	52	56.7	7,676	120	10
Total	9	47	404	363.4	61,868	857	72

Number of households for Vanj Valley have been estimated using regional family size averages

Social Characteristics. The typical household¹⁰ in the project areas is similar in many ways to the general population of the country, but is poorer. The vast majority of the population can be classified as very poor or poor. The average household has 6.1 people, including 3.6 children. The vast majority are headed by men (1.3% of the sampled households are headed by women). About half of the households have a relative from outside the immediate family living with them, but only about one household in eight has a parent of a household head. Almost all members have completed their high school education, with wives and parents receiving on average one year less in education. Ninety percent of the sample is Tajik, 5.5% is Kyrgyz and 4.4% is Uzbek. Almost the entire sample is Sunni (only 0.2% are Shi'ite). Collectively, the project area population is quite homogeneous in background. The project area communities undertake collective action organized through traditional leadership structures. These leaders of traditional community institutions are elected somewhat democratically, but not all make decisions through village-wide discussions and women are often excluded from decision making.

Social Issues. The Social Assessment found that most important social development issue is the difficulty households are having in obtaining enough food to eat and enough clothes to protect them from Tajikistan's difficult climate. Agricultural production is low due to limited access to land and low yields. Access to seeds and irrigation is also limited. Project area residents are aware of the linkage between poverty and environmental degradation, and report that mudslides, soil erosion, and to a lesser extent, silted waterways are a big problem. Problems of infrastructure are also widespread, creating broad inefficiencies in employment, income-generation, agricultural production and processing, as well as bringing significant problems in health and education. Only about 40 percent of households have access to piped water and only about one-fourth of these households have access 24 hours each day. Most people have access to electricity (97 percent), but only five percent have access 24 hours each day. In many locations,

¹⁰ Based on the Social Assessment, including a sample survey of three of the four watersheds (Surkhob, Zarafshan, and Toirsu).

electricity is available only two to four hours a day in autumn and winter months. Coal, diesel and kerosene are seen as prohibitively expensive alternatives for many households, so they have adopted wood as their primary energy source.

Land Use. The proportion of the total catchment area used for agriculture varies from a below 5% in the case of Vanj to a high of 74% in the case of Toirsu, with 10% in Sorkhob and 27% in Zarafshan respectively. There is considerable variation on the proportion of agricultural land within raions and Jamoats of each watershed. The average amount of agricultural land per household varies from about 4 ha in Vanj to over 13 ha in Toirsu, and both Surkob and Zarafshan averaging between 6 and 7 ha per household. Pastures dominate the agricultural land – 73% in Toirsu, 74% in Vanj, 86% in Surkob, and 92% in Zarafshan. Land in annual crops and plantations averages less than one ha per household, except in the case of Toirsu, where it averages about 3 ha per household. Again there is considerable variation within each watershed around these averages. Large portions of Surkob and Vanj have reverted to subsistence farming since independence.

Land Degradation. The soils in large portions of the four watersheds are naturally subject to water and wind erosion, which the misuse of sloping lands further exacerbates, causing significant downstream damage in the form of excess runoff, siltation, landslides, and flood damage. Mudflows have become more common. Cereal crops on steep slopes also deplete the soil fertility. Weeds now infest pastures as a result of the disruption of land management arrangements, and trees and bushes have been over-harvested to meet household fuel requirements after the fuel subsidies of the Soviet era collapsed. The project would help to prevent additional degradation.

Biodiversity Degradation. The pasture lands and wider watershed basins contain a rich mix of plants including rare and genetically valuable grasses, herbs, bushes, and trees. Red book plants in the four watersheds include the Persian binium, Rozenbakh wild leek, Gissarsky rhubarb, Vavilov almond, and Kayon pear. Other important genetic resources include walnut, plum, Sogdiysky nut, Anzyrsky wild leek, Sievers apple, barberry, Zeravshansky nut, black currants, Altai mountain sheep argali, Pontiysky hawthorn, Real pistachio, Lukovichny barley, Pherula kukhistanskaya, Rea nut, Bukharsky almond, Thick-stalked vetch, Borodavchataya cherry, and blackberry. Varieties within these species are also important -- many of these provide an important source of land races and wild relatives of domesticated plants. The four watershed also provide habitats for rare and endangered animals such as the Dough eagle, Tien Shan sparrow-hawk, Redheaded peregrine, Middle-Asia otter, kadan, weasel, snow leopard, Siberian wild goat, Zeravshansky pheasant, Black stork, Bearded partridge, Indian porcupine, urial, Marco Polo wild sheep, keklik, boradach, desert partridge, kustarnisa, and Golden eagle. The prevention of additional degradation would help to address the major threats to this biodiversity, while the preservation of live plant specimens will help preserve indigenous material important for agriculture.

Watershed Functions. Each of the four watershed are sources for important rivers crossing international borders. From the Surkhob valley, located about 200 km east-northeast of Dushanbe and with a catchment including tributaries of about 20,200 km², the Surkob River flows into Vakhsh river, and at the Afghan-Tajik border merges with the Pyandzh River to become the Amudarya River. The Amudarya then flows through Uzbekistan and Turkmenistan (supplying their irrigation systems), and eventually reaches the Aral Sea. In the Zarafshan Valley, north of Dushanbe with a catchment including tributaries of about 12,500 km², the

Zarafshan River flows into Uzbekistan, supplying the water for large irrigation systems. In the Toirsu valley, located about 100 km southeast of Dushanbe, the Toirsu River is 118 km long and encompasses a catchment area of 1860 km². It merges with the Kzilsu River to the south, eventually becoming the Pyandzh River on the Tajikistan-Afghanistan border. Further west along the Afghan-Tajik border, the Pyandzh River merges with the Vakhsh river (with its headwaters located in the Surkhob valley) to become the Amudarya River. In the Vanj valley of Gorno-Bodakshan, located about 300 km southeast of Dushanbe and with a catchment of about 2100 km², the Vanj River merges with the Pyandzh River flowing south, toward the Afghani border. Further West, along the Afghani border, the Pyandzh River merges with the Vakhsh River (with its headwaters located in the Surkhob valley) to become the Amudarya River. Tajikistan retains only about 8-10% of the water that falls/melts/flows within its territorial boundaries. The rest flows into the Syr Darya in the north and the Amudarya in the south, where the water is consumed by the much larger and thirstier agricultures in Uzbekistan, Kazakhstan, reducing these two rivers to a trickle when reaching the Aral Sea. The project complements past and ongoing Tajikistan government efforts, including those that have been supported under the GEF financed Water and Environmental Management Project for Central Asia, which helped the Tajikistan Government to develop its national water strategy, and the Bank financed Farm Privatization Support Project, which is now providing support for the development of a national water code that will encompass all aspects of water use, its extraction, and release back into the system. The project is also consistent with the Aral Sea Basin Program, which identified upper watershed management as a priority for its second phase. The project will reduce the run-off from the catchment areas, which in turn will reduce river silting and damage to the downstream irrigation works and water reservoirs which are so important to the livelihoods of not only Tajikistan's population, but also the people in other Central Asian countries.

Project Phasing

Project activities would be phased in gradually beginning in Surkhob in the first year, and then including Vanj, Zarafshan, and Toirsu within the next two years. With JDCs already established, Surkhob is well suited to pioneer the project activities, and to serve as a working example and source of lessons learned for the other project watersheds. Wherever JDCs are not well established, NGOs and PCUs will initially help with their formation before focusing on the development of rural development subproject proposals. Within the watersheds, Jamoats and villages would also be phased in gradually. Overall this phasing would result about 20 villages beginning project activities in the first year, 61 additional villages in the second year, 121 additional villages in the third year and 202 additional villages in the fourth year. Each village would take three years to receive their support from the project and implement the associated rural production investments. As specified in Annex 3, only about 300 households are expected to participate in rural production subprojects during the first year of the project. This phasing will allow the project procedures and arrangements to be tested on a small scale and fine-tuned before they replicated widely.

Project Activities

The proposed project will have three components:

Component I: Rural Production Investments

Communities would select from a menu of farm-related income generation, land restoration, and infrastructure activities.

A. Farm Productivity Improvement Activities. Individuals, and groups of farming households will invest in a range of commercially viable productive enterprises of their choice on their lands. Investments may include:

- Improvements in the productivity of field and horticultural crops (fruit and nut trees, vineyard, vegetables, potatoes, wheat, barley), medicinal plants, mulberry for sericulture, etc. through adoption of advanced technologies developed by CGIAR/TARS¹¹.
- Small scale processing facilities and developing of a distribution mechanism for products such as milk and milk products, fruits, meat, including, grading & packaging of goods, establishing of storage and/or marketing facilities, etc.;
- Establishing livestock owners associations to promote improvements in livestock production, organize buying or producing fodder and feed, organizing vaccination campaigns, building of enclosed pens, or fencing of parcels, and introduction of pasture rotation or any other new technology or mechanism that would help facilitate the development of livestock in the area; and
- establishing small scale farm machinery leasing units

This subcomponent also contains a provision for supporting the development of member-owned organizations with revolving funds or credit, which would be able to provide funds for subsequent investments after the initial subproject grant. Financing of investments after the initial subproject grant will be provided either through reinvestment of retained earnings, or through credit or revolving funds¹². The absence, or under-development, of financial services is a salient problem within the project area, and will threaten the viability of the productive and land management investment. To address this problem, the project will, where appropriate and where there is enough demand, help communities in establishing member owned credit facilities following the Non Bank Financing Organization (NBFO) model already developed under the FPSP in collaboration with ACDI/VOCA, and outlined in the NBFO Operational Manual. Project support could include grants for initial capitalization of the NBFO. In some cases, adoption of the NBFO model may be able to build upon and help institutionalize JDC revolving funds which already operate on a more informal basis, and capitalization support from the project may not be necessary. Establishing member owned credit facilities could take place once a first round of grants has been provided to participating residents and interest groups with the expectation that a portion of the surplus produced through the subprojects would be reinvested by the community to establish an NBFO. These bodies would then help under the project to provide seasonal credit and investments for farm related productivity improvements. There is also the possibility to link up the credit services with the newly registered First Micro-Credit Bank that would begin operations in the second quarter of 2004. This new bank has been sponsored by the Aga Khan Foundation (AKF) in collaboration with IFC and EBRD that provided some initial capital. Depending on how the development of the First Micro Credit Bank progresses, it is possible that in certain regions, this new bank could be linked to become the credit provider for the participating NBFOs under the proposed CAWMP.

¹¹ TARS -Tajikistan Agricultural Research System,

¹² From the newly created Micro-finance Bank of Tajikistan, existing interest bearing revolving funds operated locally with donor support, or newly created member owned revolving funds building on the Non Bank Financing Organization (NBFO) model developed under the World Bank financed Farm Privatization Support Project (FPSP)

B. Land Resource Management: This subcomponent enables local people to adopt more sustainable land use on sloping lands that are currently under jurisdiction of the Jamoat. Overall, the 78,000 ha subject to this subcomponent represent about 10% of pasture land in the project Jamoats. The subcomponent would rehabilitate degraded sloping land that has been or is currently being used for cereal crops, subject to localized overgrazing, neglect, or other poor land management practices by supporting investments such as contour planting of economically beneficial trees with associated soil and moisture conservation structures, or pasture improvement. In addition to creating an livelihood incentive to sustain investments, the combination of income-generating investments with soil conservation works enhances the organic content of the soil. To provide a further incentive, participants would receive land use certificates after three years of good maintenance, subject to continued good land use. Typical investments will be for groups of nine or more households working on adjoining areas and might include:

- Contour planting of trees, especially those with economic value such as walnuts or pistachios to protect rain-fed arable sloping land. Such activities could be coupled with appropriate soil and moisture conservation structures such as mini-terracing using natural hedges and basin and contour drainage channels.
- Establishment of poplar, willow, or other fast growing woodlots for fuel, building materials and windbreaks. This would include introduction of micro-structures and tree planting specifically for soil erosion and gully control.
- Development of pasture lands with improved fodder production capacity for enhanced carrying capacity on a sustainable basis and enhancing the income.

Blended financing from GEF will 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 will be made to community groups. Rural infrastructure investments will be restricted to productive investments that provide immediate benefits and include operations and maintenance financing arrangements. Typical investments may include:

- Provision of safe drinking water by rehabilitating or improving existing drinking water supply systems owned by the community.
- Limited patching and rehabilitation of access and feeder roads to facilitate transport and improve access to markets.
- Community owned mini-hydropower or wind driven power generation, to improve quality of life and enable income generating activities.

In addition to a formulaic allocation to villages, JDCs will have a small discretionary budget (not exceeding 10% of the total rural infrastructure budget allocated to its constituent villages) for rural infrastructure to address supplemental funding needs such as those required for underserved areas, subprojects involving multiple villages, market development, and/or significant environmental benefits.

Contribution Requirements and Budget Constraints. Beneficiaries have to contribute their own resources in the form of labor, material and cash, for at least 20% of the total value of any type of rural production investment. Investment proposals will be prioritized within formulaic fixed

budgets for each subcomponent for each community as a whole. About 50% of the project area residents will participate in at least one type of investment. Each participating household can receive a one-time start up grant of up to \$240) for farm productivity investments, or up to \$200 for land resource management investments. If households want a combination of both farm productivity and land resource management investments, the combined total of investments per household must not exceed \$200, not counting the local beneficiary contribution. Rural infrastructure investments will not exceed \$50 per benefiting household and will only be made if no alternative funding is available from other donor programs such as NSIFT. Beneficiaries of rural infrastructure investments will have to contribute at least 5% of the total costs in cash at inception. Grants under this component would be disbursed in tranches directly to beneficiaries or groups either through JDC sub-accounts or through their own bank account with Amanatbank that has branches in most Jamoats.

General eligibility and feasibility requirements. Rural production subprojects are required to meet the following eligibility and feasibility principles.

- *Add supplemental resources.* Confirm that alternative sources of funding and support are not available.
- *Be technically feasible.* For example, inputs and technical advice are adequate, physical conditions are suitable, activity is technically sound in accordance with agreed standards.
- *Be financially and commercially feasible.* For example, the costs are within recognized norms, cash flow is viable, market linkages and absorptive capacity are adequate (where relevant), returns and/or payments are sufficient to maintain assets and operations (including improved production levels where relevant), and returns compare favorably with alternative investment options
- *Be socially inclusive and considerate .* For example, take into consideration issues faced by women and vulnerable people, and involve them in decision making, receipt of a share of subproject benefits, and associated monitoring. Also, ensure that restrictions of access associated with subprojects, if any, either do not harm the livelihoods of poorer members, or are mitigated through compensatory support.
- *Be institutionally feasible..* For example institutional capacity is adequate to distribute benefits from common resources fairly, provide physical maintenance, keep accounts, meet contribution requirements
- *Be environmentally sound and sustainable.* For example consider what are the main environmental impacts, who might be potentially affected by these impacts, and in what ways. Also, explore ways to avoid or mitigate negative environmental impacts, and arrangements to monitor and assess environmental impacts during implementation. As a GEF-financed project, special attention should be paid to sustainable land management and biodiversity conservation considerations.

To ensure consistency with the contribution, eligibility, and feasibility requirements, the first ten subproject proposals and associated draft memoranda of understanding with JDCs for each watershed would be subject to the approval of IDA.

Component II. Institutional Support and Capacity Building

This component ensure that a sustainable institutional and organizational environment is created to ensure that investments are sustainable beyond the project life. Significant investments will be made in training the benefiting communities and local government as well as respective line ministries.

A) Support to Research and Demonstration.

This subcomponent strengthens scientific institutions to help provide necessary technical services including training to communities. It includes strengthening the capacity for seeds and seedlings production improvement, and for improved livestock breeding and animal health and husbandry. Analytical support and training on market development will also be provided. Under this subcomponent the project will strengthen several scientific institutions namely: the Horticultural Research Center «Bogparvar» of Tajikistan's Academy of Agricultural Sciences, the Scientific Research Institute of Forestry, the Botanical Institute of the Academy of Sciences, the Soil Science Institute of the Academy of Agriculture in Dushanbe, and the Veterinary Institute. The Central Asia and Caucasus (CAC) center of the Consultative Group For International Agricultural Research (CGIAR)] at ICARDA, Tashkent will provide technical services including training of communities in the project areas. Ongoing FAO programs within Tajikistan will help support veterinary aspects. The State Committee for Nature Protection (SCNP) and Ministry of Agriculture (MOA) will participate in capacity building activities related to environmental assessment and monitoring. MOA, the National Farmer's Training Center, and the SCNP, the State Land committee, and State Statistical Service will participate in training activities and market information and analysis. A small amount of support for facility rehabilitation and equipment is included. More specifically the subcomponent includes the following activities

- Development of seeds and seedlings for horticultural crops and fruit trees suitable for the project watersheds. This will support the spread of economically viable crop varieties of fruit and nut trees such as apple, peach, cherries and walnut, almonds and grapes; introducing new varieties of pulses, oilseeds and cereals, introducing potatoes and garlic for intercropping, developing grasses and legume seeds for improving the quality of pastures, and introducing quick growing seedlings of timber and fuel trees for farm forestry propagation. It involves support for nurseries and research trials on farmer's land under the technical oversight of the horticultural, forestry, and botanical institutes named above. The project would also support the provision of expert advice and training from CAC and others for the participating institutes and farmers, as well as dissemination activities to promote more widespread adoption of improved planting stock and associated technologies.
- The soil science institute would play a lead role in collaboration with other institutes, in the development of scientific methods for soil conservation practices by supporting adoptive trails and method demonstrations on farmer's lands. This will focus on those techniques combining increased crop production while preserving precious top soil resources, for dissemination to farmers in watersheds. It would include support for the development and propagation brushwood and sturdy grasses for planting on contours against slopes for soil and water conservation.
- Strengthening of the capacity to preserve live specimens of wild fruit crops and wild nuts and other plant species and landraces. The project will restore existing facilities at the

horticultural and forestry institutes for preservation of live specimens both within their own facilities, improve their capacity to foster *in situ* preservation on public and private lands, and also improve the access of CAC to specimens so as to facilitate further research of global importance. CAC and others will provide expert advice and training in identification, collection and preservation methodologies, as well as help to share information on the evolving research initiatives and findings associated with the live specimen preservation.

- Strengthening the capacity of livestock breeding, including selection, registration, and performance testing, as well as strengthening animal health by supporting veterinary services and access to effective protection.
- Strengthening the provision of market information and market analysis relevant to investments being supported under the rural production component.
- Strengthening the capacity of SCNP and MOA staff, and expanding skills of other project staff and stakeholders in environmental assessment and monitoring, through the provision of training and a small amount of laboratory equipment. The PMU environmental specialist would provide overall guidance for this activity.
- Organization and implementation of a master training and advisory program for mountain areas. This will initially include training of specialists at the raion level who will foster effective information dissemination to help farmers raise awareness of communities on land degradation and its causes, and adopt integrated watershed development approaches. The intention is to eventually establish an advisory service at the JDC level and also at the MOA and watershed levels, especially if additional donor financing from IFAD becomes available. The focus of this activity would be to select and train advisors and private extension workers to promote scientifically proven technologies over a period of time and providing the effective linkage between these scientific institute and the communities. In other words a systematic institutional capacity would be built for providing training and information to disseminate advanced land management and on-farm and off-farm production technologies to enhance the income levels of farmers on a sustainable way.

B) Community Mobilization and Subproject Preparation : This subcomponent comprises the following elements:

- Provision of facilitation support and technical advice through experienced local personnel contracted through international NGOs that are already active within Tajikistan. These contracted NGOs would facilitate the initial participatory analysis and preparation of community action plans at the village level, assist CIGs and households to prepare and implement their subproject proposals, help arrange the local appraisal of subproject proposals and additional technical support from public agencies, and help build the capacity of the JDCs and WDCs to undertake their project responsibilities, including the decision making on proposals and monitoring. In the watersheds where JDCs are not already established, the NGOs would also help with JDC establishment.
- Support for small initial confidence building mobilization grants for each village. During the initial participatory analysis, the project would provide each village with a mobilization grant of \$1000, to establish credibility. This grant would be used for an initial investment chosen at the discretion of the village, in most cases probably a simple, low cost rural infrastructure intervention. Like the rural production investments, the beneficiaries would be required to contribute at least 20% of the total cost of the investments, and it is expected that most of this

contribution would be in-kind in the form of labor or local materials. Channeling this grant through the NGO contract will enable its prompt and easy administration. The investments would not be subject to review and approval procedures that apply to rural production investment component, although the general eligibility and feasibility principles would still apply. The mobilization grants will enable participating villagers that gain the trust that the project will deliver results on the ground, and not get stuck in elaborate planning processes.

- Support for training and dissemination on a wide variety of technical, environmental, financial, marketing, management, and institutional topics, over and above what will already be provided through the overall NGO contracts for facilitation and technical support, and the grants to technical institutes supported under the research and demonstration subcomponent. Activities will include training of trainers for NGO and PCU staff; training of CIGs and households in how to address specific feasibility issues that affect a number of subprojects; information dissemination on improved technologies and market assessments; training in group process for CIGs; JDCs and WDCs; study tours to similar CIGs and comparable well functioning external projects; and environmental awareness raising. It will also include communication activities to help ensure that project stakeholders have a clear understanding of the project and the various aspects related to it, especially when the project is beginning implementation in a particular watershed, Jamoat, or village. Capacity development for JDCs will take into account broader country-wide initiatives on community-linked development, decentralization, governance reform, and help JDCs develop their own long-term vision and sustainability plans. Typical expenditures may include fees or honoaria for trainers and performers, curricula and information package development, production of dissemination materials, travel and per diem for training participants, renting of communications equipment and training facilities, etc.
- Support in each Jamoat for a small amount of office furniture, a safe, steel cupboard and other field equipment. This will enable the JDCs to store documents associated with community action plans and subprojects, handle cash payments to subproject beneficiaries, and otherwise undertake their project responsibilities.
- Payment of a small monthly fee to one accountant in each JDC for the work they undertake, on the administration of the subaccounts for each subproject within their respective Jamoat.

Component III. Project Management and Coordination

The project management subcomponent would support the 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. The component would support the:

- National Project Management Unit. The project will augment and extend the life of an existing PMU that currently serves two ongoing Bank projects, thus building on project administration capacity and arrangements that already exists. While some PMU specialists may be shared across projects during the initial months, in due course most specialists will be working on CAWMP full time. Project specialists include a project director, project manager, and specialists in environment, social development, finance, procurement,

monitoring and evaluation, and land management. Part time advisors in finance, procurement, and monitoring and evaluation will provide additional expertise. The project also provides support for a vehicle, office furniture and equipment, and incremental operating expenses, including travel. Annex 6 describes PMU responsibilities.

- Project Coordination Units for the four project watersheds, phased in as project activities begin in a particular watershed. They will have a core staff on fixed term contracts composed of a rural engineer, a land management specialist, a community development specialist, and a financial and monitoring and evaluation (M&E) specialist. The project also provides support for vehicles, office furniture and equipment, and operating expenses, including travel. Annex 6 describes PCU responsibilities.
- Evaluation studies. The project includes support for studies such as the periodic independent survey of subproject experience and results, updates of the social and poverty impact assessment, and the imagery data, ground truthing, and analysis for the review of land degradation trends during the past decade, and periodic updating of this trend analysis.

Annex 5: Project Costs

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Project Cost By Component and/or Activity	Local US \$million	Foreign US \$million	Total US \$million
Rural Production Investments			
Farm Productivity Improvement	1.78	0.76	2.54
Land Resource Management	4.08	1.75	5.83
Rural Infrastructure	1.63	0.70	2.34
Subtotal	7.50	3.21	10.71
Institutional Support and Capacity Building			
Support for Research and Demonstration	0.78	0.63	1.41
Community Mobilization and Subproject Preparation	1.75	0.80	2.55
Subtotal	2.53	1.44	3.97
Project Management and Coordination			
Project Management Unit	0.93	0.81	1.75
Project Coordination Units	0.63	0.37	1.00
Evaluation Studies	0.24	0.35	0.59
subtotal	1.81	1.53	3.34
Total Baseline Cost	11.84	6.18	18.02
Physical Contingencies	0	0	0
Price Contingencies	1.19	0.58	1.77
Total Project Costs¹	13.03	6.76	19.79
Interest during construction	0	0	0
Front-end Fee	0	0	0
Total Financing Required	13.03	6.76	19.79

¹Identifiable taxes and duties are US\$ 1.76 m, and the total project cost, net of taxes, is US\$ 18.03 m. Therefore, the share of project cost net of taxes is 91.1%.

Annex 6: Implementation Arrangements

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Overview.

The project will follow 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 JDCs playing a key role. Villages would allocate 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 Agha Khan Foundation, Mercy Corps International, German Agro Action and other international NGOs 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 would then assist common interest groups in developing feasible and eligible proposals. Guidelines include communications, group process, organizational and administrative arrangements, contribution requirements, budget limits, institutional capacity, social, financial, commercial, technical, and environmental considerations. After review and approval¹³, the JDC will provide resources directly to the common interest groups (and in the case of farm productivity subprojects, households) undertaking the subprojects. The common interest groups would have ownership of completed installations, and responsibility for their subsequent operation and maintenance.

Implementation Roles and Responsibilities of the various project stakeholders

Common interest groups (CIGs), and individuals, are the primary beneficiaries they will identify and propose subprojects, (with help of facilitators and specialists, NGOs) including subproject implementation and funding plan: As such they will:

- developed the detailed subproject proposal
- request and obtain the necessary clearances necessary to implement the proposed subprojects,
- administer and manage the implementation of subprojects in accordance ,
- collect and record member (beneficiary) contributions to proposed subprojects,
- request replenishments against work performed and submission of SOEs and receipts, accordance with an agreed memorandum of understanding with the JDC

Villages will be organized by NGOs to carry out their project responsibilities. In many cases they will make use of the formal or informal village organizations that already exist. Villages will consist of geographic groups of 40 to 500 households. They will receive project budgets for each of the three types of rural production investments based on their total number of households, and plan the allocation of these budgets among households over a three year period. The villages will:

- undertake the initial participatory analysis of their own capacities, issues, and subproject options
- develop a community action plan identifying the allocation of subprojects within their pre-specified budget constraints, and indicative summary information on the proposed location,

¹³ JDCs could approve subprojects requiring financing of less than US \$500 each up to a cumulative maximum of \$5000 per year, WDCs would approve subprojects requiring financing of less than US \$5,000 each, while the NLSC would approve all other subprojects up to a maximum of US\$ 50,000 each subproject.

beneficiaries, timing, activities, inputs, costs, and beneficiary contributions of the subprojects.

- review implementation experience and update community action plans, on at least an annual basis

Jamoat Development Committees (JDCs) have already been formed under a program implemented by the UNDP Rural Reconstruction and Development Program in the Jamoats (subdistricts usually comprising several villages) in the Surkhob valley area of the project. The project will work closely with these organizations, in liaison with the RRD. The project will provide some additional support for the existing JDCs and will support the formation of new JDCs in the project raions where they do not exist. The JDCs consist of an elected member from villages, with an elected chairman and a paid accountant. They will meet on at least a monthly basis once the project is operational in their area. Each JDC will be registered with the government as a nonprofit, non-government member service provider. JDCs will be expected to:

- screen the community action plans from villages and the associated subproject proposals from CIGs and households, and maintain associated records
- work with Jamoat officials to facilitate allocation of Jamoat land for the land resource management investments, and where needed, facilitate coordination and collaboration across villages in land resource management subprojects
- have and allocate a small discretionary budget for rural infrastructure subprojects to address supplemental funding needs such as those required for undeserved areas, subprojects involving multiple villages, market development, and/or significant environmental benefits.
- provide information to CIGs on alternative non-project sources of funding that should be pursued prior to or instead of subproject funding
- send their own representatives to participate in subproject appraisal teams
- review subproject proposals, and approve eligible farm productivity subprojects requiring project financing of no more than US\$ 500 per subproject up to a cumulative maximum of US\$5,000 per Jamoat per year,
- agree upon and sign Memorandum of Understanding (MOU) with participating CIGs and households defining roles and responsibilities of each party, including fund release timing, procurement arrangements, and other conditions,
- release funds to common interest groups or households upon authorization of project staff in accordance with agreed subproject-specific schedules and benchmarks,
- review annual Jamoat-level project budget projections
- elect representatives to participate in the Watershed Development Committee (WDCs)
- open and maintain project accounts and subproject subaccounts for funding of which they are responsible,
- facilitate clearances and registrations or other administrative burdens as maybe required for the successful implementation of community subprojects,
- monitor subproject implementation and other Jamoat level project activities and report quarterly to the PCU.

Facilitators and Specialists. The PMU will contract NGOs based on clearly defined qualification criteria to be able to provide managerial, sector and technical specialists to support CIGs, households and JDCs . It is anticipated that the project will use such as the Agha Khan Foundation (AKF), Mercy Corps International (MCI), German Agro Action (GAA), ACTED, Care International and other international NGOs already active in Tajikistan to provide this

support, using mostly local personnel. The NGO contract would include full time facilitators, as well as full or part-time specialists in financial management, marketing, business development, gender, credit, agriculture, livestock, and other fields. The contracted NGOs will:

- facilitate the initial village participatory analysis and preparation of community action plans
- administer confidence building mobilization grants for villages that will be implemented during the initial planning exercises
- assist villagers to prepare and implement subproject proposals, including arranging the technical assistance and training from their own specialists and government agencies as required for the villagers to undertake the feasibility analysis and detailed design
- arrange and participate in the local appraisal of subproject proposals
- assist villages and JDCs in conducting participatory monitoring of project implementation and contributing to progress reports
- help build the capacity of JDCs and WDCs to undertake their project responsibilities
- promote good relations among all project stakeholders and help in conflict management.

Technical institutes and line agencies, especially staff at the raion and jaomoat level will provide technical advice and required clearances for the subprojects. They will be able to attend JDC and WDC meetings in as ex-officio members when relevant. They will also help develop improved technologies. Annex 4 provides further details.

Watershed Development Committees (WDCs) will be established in each watershed composed of elected representatives of JDCs plus the raion administrators. PCU staff, line agency staff and NGOs will participate in an ex-officio capacity. They will meet on a bimonthly basis. WDCs will:

- provide facilitation support to subprojects planning and implementation with prompt issuance of licenses, permits, and necessary regulatory clearances, in collaboration with the various line ministry staff working at the raion level
- review and comment on yearly project budgets submitted by JDCs to the PMU
- consider the combination of all proposed subprojects within the context of the overall watershed
- review and approve proposals of less than US\$ 5,000 (except for those already approved by the JDC), and provide clearance to PMU for release of funds to account for such subprojects¹⁴,
- review and provide recommendation for subprojects above US\$ 5,000 and send along to the SLC for review and approval,
- bring administrative, policy, and other issues that are affecting project performance to the attention of the NLSC, and make proposals to central government for legislative and regulatory amendments to facilitate efficient implementation of projects at the local level.

Project Coordination Units (PCUs) will be established by the PMU in the four watershed covered by the project to support the WDCs. They will

- prepare WDC meeting agenda and summary briefing materials, and draft minutes
- compile and submit monitoring and project progress reports
- liaise with line agencies to ascertain status of government permits and clearances required for subprojects and otherwise foster linkages with technical agencies

¹⁴ Decision making authority for various funding levels will be reviewed periodically, and may be revised in light of project experience

- interact with JDCs and NGOs and ensure quality control of subprojects (with expert assistance,
- organize training programs

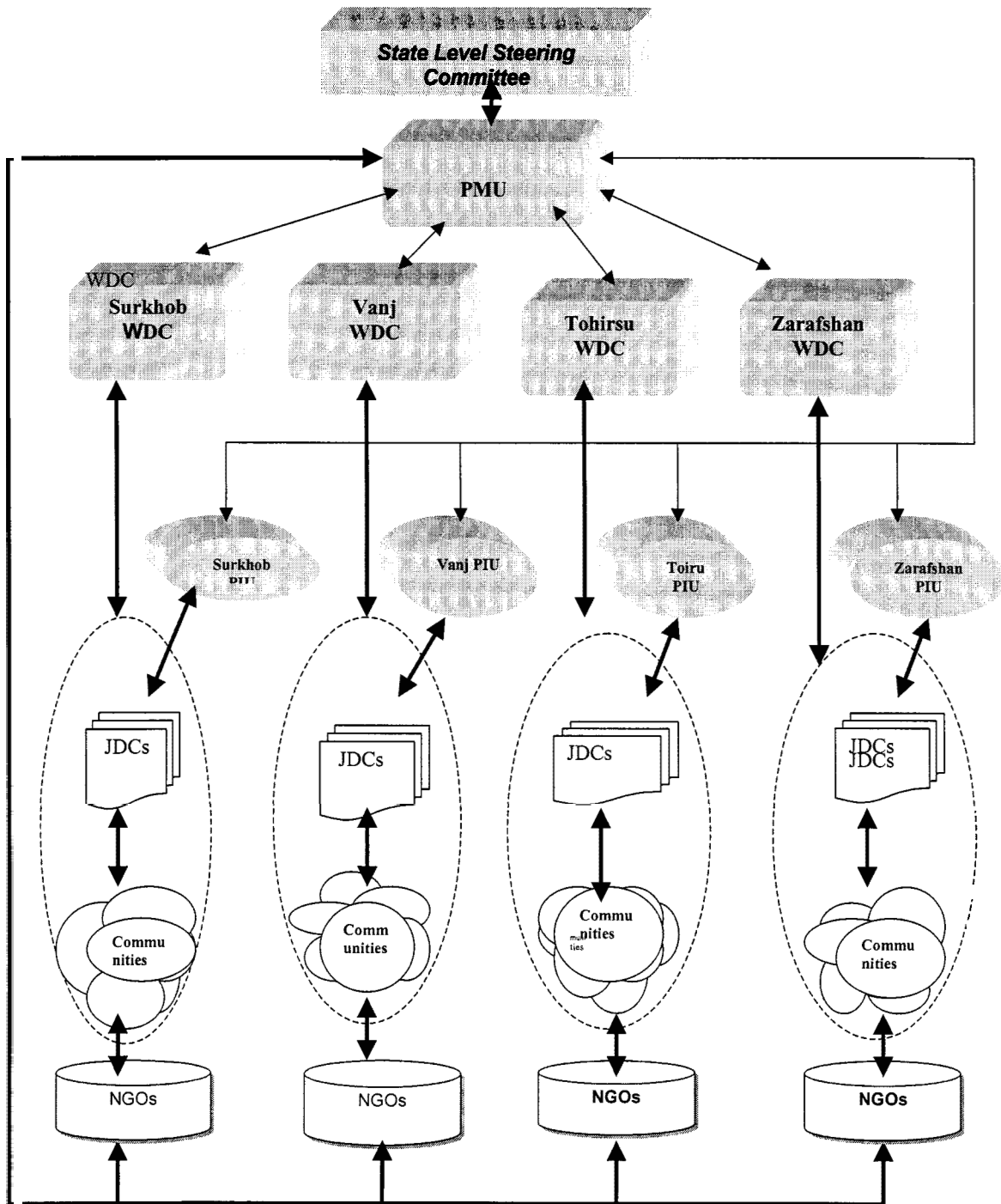
The ***State Level Steering Committee (SLSC)*** is a body composed of the PMU Director and top level representatives of the ministries that are involved with technical advice to the project. It will be chaired by the Deputy Prime Minister responsible for Agricultural Affairs and include members representing the Ministries of Finance, Agriculture, Nature Protection (Environment), and Irrigation and Water Resources, as well as representatives of the State Land Committee, Internal Revenues and National Bank. It will:

- review and approve yearly project budgets proposed by the PMU based on input received from JDCs and comments from WDCs,
- meet quarterly to review and approve proposals above US\$ 5,000 and provide clearance to PMU,
- support, guide any policy or legal/regulatory aspect needed to facilitate successful implementation of the project.
- oversee the activities of the PMU, including the review and approval of PMU work-plans and budgets.

The ***Project Management Unit (PMU)*** will be based in Dushanbe sharing existing facilities following the approach currently used for the FPSP and the RIRP. The PMU will serve the SLSC and report to the Deputy Prime Minister. It will:

- be the overall project coordination body, acting as a secretariat and executive of the SLSC (including the preparation of meeting agenda, work plans, budgets, implementation schedules, information on subproject proposals pending SLSC approval, monitoring and progress reports, evaluation studies, and comments on policy and other project issues)
- provide institutional support to the watershed-based PCU offices with emphasis on project management including finance and administration, audit, procurement, and monitoring and operation of the project information system.
- hire staff at PCU level, contract NGOs, and contract evaluation studies in close consultation with the Bank Team.
- provide basic information and guidance to all project stakeholders, and exchange information on experiences with other similar programs, both nationally and internationally ,
- update and adjust operational procedures and associated documents in consultation with NGOs and PCUs
- facilitate inter-ministerial coordination
- function as project paymaster for the project as an executive of SLSC decisions

Organizational Diagram : Implementation arrangement



Annex 7: Financial Management and Disbursement Arrangements
TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT
PROJECT

Financial Management

Assessment. A pre-appraisal assessment of the financial management arrangements for the Project was undertaken during November 2003 and February 2004 to determine whether the financial management arrangements are acceptable to the Bank. These financial management arrangements include the PMU's systems of accounting, financial reporting, staffing, auditing, and internal controls in place during the project preparation phase. In April 2004, an update of the pre-appraisal assessment determined that the FM arrangements are satisfactory and meet the World Bank's financial management requirements.

Country Financial Management Issues. A Country Financial Accountability Assessment (CFAA) for Tajikistan was completed in 2003 and was disseminated to Government authorities in October 2003. The CFAA concluded that the country's fiduciary environment is extremely weak and the risk to public funds is high. The findings included, among other things, that systems of public accountability function poorly and public sector transparency is still a problem at all levels of government.

Strengths and weaknesses. The primary strength of the PMU financial management system is the continuity in procurement and financial management personnel responsible for implementing the existing projects within the Ministry of Agriculture.

Implementing entity. A Project Management Unit (PMU) exists within the Ministry of Agriculture for implementing two current WB-funded projects, the Farm Privatization Support and Rural Infrastructure Rehabilitation projects. The PMU will carry out the day-to-day activities of the Project which will include: procurement; project accounting and financial reporting; monitoring and evaluation of activities of JDC's and regional PCU's; administer special accounts and withdrawal applications for disbursements; and coordinate external audit arrangements.

Funds flow. The project funds will be disbursed through three Special Accounts (one for IDA Grant, one for IDA Credit and one for GEF Grant) at a commercial bank acceptable to the World Bank. To facilitate timely project implementation, the PMU will establish, maintain and operate, under terms and conditions acceptable to the Bank, each Special Account at a local commercial bank. A project account will also be opened by the PMU (in a local commercial bank) to facilitate payment for local project expenditures financed from Government counterpart funds. Sub-project accounts will be maintained for use by the regional PCU's and JDC's to facilitate payment for local project expenditures.

The PMU will manage each Special Account, including preparing withdrawal applications and supporting documentation, replenishment and timely reconciliation of the Special Accounts. The replenishment applications should be submitted at least every month and must include the Special Account Reconciliation Statement and relevant supporting documentation.

Staffing. The PMU has designated the Chief Accountant from the existing project (Farm Privatization Support Project that is expected to close in 2004), to assume the same position for this project. The Chief Accountant has been employed by the PMU for over 2 years; he has

demonstrated a strong working knowledge of World Bank financial management and disbursement requirements; and, is proficient in the use of the computerized accounting systems utilized by the PMU. The remaining accounting positions of financial analyst and cashier will be identified, either from within the PMU or hired externally, upon project implementation. The regional PCU and JDC financial management personnel (accountants and cashiers) will be hired when respective PCU and JDC are established.

Accounting policies and procedures. The PMU, regional PCU's and JDC's will maintain appropriate financial records and accounts in accordance with procedures to be established under a Project Implementation Plan as described in the Financial Management and Administrative Procedures Manual. These accounts that will be in accordance with consistently applied accounting standards acceptable to IDA, will reflect the progress of the project and identify its resources, operations and expenditures. The project accounts will reflect all financial transactions during the project period separately for the IDA Credit, IDA Grant and GEF Grant, beneficiaries, and government counterpart financing by project component and by expenditure categories. The project accounts will be maintained independently from any routine budget account or other externally funded project account.

Internal audit. The Treasury Department within the Ministry of Finance lacks the necessary capacity in internal audit (also confirmed in the recent CFAA) to provide any assurance to the World Bank and Government. In addition, there is no existing internal audit department within the Ministry of Agriculture and there are no plans to implement a permanent department within the PMU. However, the PMU will establish an internal audit-like function to assess the performance of the JDC's implementing project activities at the community level. The Financial Management and Administrative Procedures Manual describes a series of "internal audit-like" procedures to be performed by the PMU over the activities of the JDC's, including the preparation of a report for submission to the State Level Steering committee and IDA.

External audit. Annual audits for the project accounts will be carried out in accordance with the *Guidelines for Financial Reporting and Auditing of Projects Financed by the World Bank (June 2003)*. Effective from 1 July 2003, the guidelines require a single audit opinion on the project financial statements as a whole, which will include the Special Accounts Statement and the Statement of Expenditures on which Bank disbursements are made. The project will adopt these guidelines and submit a single audit opinion on the annual project financial statements within six (6) months following the end of the projects fiscal year end.

As noted, the recent CFAA concluded that the public fiduciary arrangements in Tajikistan are extremely weak. This extends to the Supreme Audit Institution (SAI) – the State Financial Control Committee (SFCC). The Bank does not expect to place reliance on the external auditing activities conducted by the SFCC related to this project. The external audit will be carried out by independent auditors in accordance with International Standards on Auditing (ISA) and terms of reference acceptable to the Bank. Appointment of independent auditors acceptable to the World Bank is a dated covenant specified in the Development Finance Agreement.

The PMU has consistently complied with the audit submission covenants included in the credit agreements for the existing projects under its implementation. In addition, matters identified by the auditors have been appropriately addressed by the PMU accounting personnel.

Reporting and monitoring. Project management-oriented Financial Monitoring Reports (FMR's) will be used for project monitoring and supervision and, subject to the foregoing, the

forms will be included in the Financial Management and Administrative Procedures Manual. The Project will prepare and submit Financial Monitoring Reports (FMR) in a form and frequency agreed with the Bank.

The FMRs will be customized to reflect the country circumstances and the needs of the project, while meeting the Bank's minimum information requirements for the financial monitoring of the Project. The FMR will therefore include (a) statement of sources and uses of funds, (b) a detailed schedule for tracking disbursements against specific contracts for civil works, goods and consultants services, (c) special account reconciliation statement, (d) Statement of Expenditures to support payments made by the Bank (either through direct payments or replenishment to the Special Account) and (e) forecast of commitments. The PMU will submit quarterly FMRs for the Project to the Bank starting with the first quarter ended in which disbursements will commence and quarterly thereafter, no later than 45 days after the relevant quarter's end.

The JDC's will prepare financial reports on use of funds to implement projects at the community level. These reports will be submitted to the regional PCU's for review prior to submission to the PMU. The PMU will include the necessary details in the FMR's and annual project financial statements.

Information systems. The features of the financial management software ("1C" Accounting Software, an Russian accounting program commonly used by World Bank funded projects in Tajikistan) to be used by the PMU include, inter alia, customizable chart of accounts, foreign and local currency, English and Russian language, Excel and Word exporting, and integrated FMRs.

The "1C" system will be customized to respond to the Project components and specifics and will be able to produce routine reports such as: trial balance, general ledger, balance sheet, income and expenditure statement by sources of funds, cash flow, suppliers' ledger, and budget to actual variances. The software system will produce quarterly Financial Monitoring Reports (FMRs) as required by the Bank's Financial Management requirements. The format of the FMRs have been agreed with the PMU and will be consistent with the current installations provided by the IT consultant for the existing projects implemented by the PMU

Each regional PCU will utilize EXCEL spreadsheets to maintain its respective books and records of account. Each JDC will maintain manual ledgers for its record-keeping purposes. The PMU will include all financial information from the regional PCU's and JDC's into the "1C" system.

Impact of procurement arrangements. The PMU, which has overall responsibility for the management and coordination of procurement at all levels under the project, has procurement personnel who are experienced with World Bank guidelines from their current implementation of two WB-funded projects. At the regional level, once community sub-projects have been approved, the JDC's will handle procurement (to levels defined in the Operations Manual) and financial management activities. The central PMU will provide support, oversight, supervision and monitoring over the JDC's to ensure adherence to IDA procurement requirements. The JDC's will also include necessary procurement documentation into the quarterly financial reports, allowing the central PMU to detect areas for improvement.

Supervision Plan. The reports of the progress of the project implementation will be monitored in detail during supervision missions. The FMRs will be reviewed on a regular basis by the field-based FMS and the results or issues followed up during supervision missions. Annual audited project financial statements and management letters will be reviewed and issues

identified will be followed up with the State Level Steering Committee (SLSC), PMU, and/or regional PCU's.

The FM supervision missions will include a review of the project's financial management and disbursement arrangements (including a review of a sample of SOEs and movements on the Special Accounts for each funding source) to ensure compliance with the Bank's minimum requirements. It is envisaged that the FM supervision missions are carried out every six months initially, and subject to satisfactory FM performance by the PMU and regional PCU's, the frequency may be reduced.

Disbursements

Disbursements arrangements. IDA (Credit and Grant) and GEF funds will be disbursed under the Bank's traditional disbursement procedures, including the use of Statements of Expenditures (SOEs) and direct payments.

Statements of Expenditures (SOEs) will be used for: (i) works contracts, except the first NCB and minor works contracts; (ii) goods contracts estimated to cost less than US\$100,000 equivalent each; (iii) services of consulting firms contracts costing less than US\$100,000 equivalent each; (iv) services of individual consultants contracts costing less than US\$20,000 equivalent each; (v) grants; (vi) training and dissemination, and (vii) incremental operating costs. The project will retain the relevant documents and make them readily available for inspection and review by supervision missions and the auditors. No taxes or duties will be financed out of the proceeds of the IDA Credit/IDA Grant and GEF Grant.

Each implementing JDC and the PCUs will compile and consolidate, on a timely basis, eligible project expenditures for activities under its responsibility. The PMU will review, consolidate and submit those withdrawal applications from the implementing agencies and the withdrawal applications for its own eligible project expenditures to IDA for reimbursement or replenishment. Authorized officials will sign the withdrawal applications in accordance with the procedures to be provided in the Project Memorandum of Understanding. The PMU Director or Financial Manager, as authorized, will sign the withdrawals from the project account.

Disbursement Accounts and Rules. The disbursement accounts and the financing rules (exclusive of taxes) adopted for each of the disbursement accounts are summarized in Table 1.

Table 1: Disbursement Accounts and Financing Rules

Description	Financing Rule
Farm Productivity Improvement. Grants	IDA Credit (77%), Beneficiaries (20%)
Land Resource Management Grants	IDA Credit (4%), IDA Grant (17%), GEF (58%), Beneficiaries (20%)
Rural Infrastructure Grants	IDA Grant (80%), Beneficiaries (20%)
Mobilization Grants	IDA Grant (80%), Beneficiaries (20%)
Research and Demonstration Grants	IDA Credit (62%), GEF (38%)
Civil Works	IDA Credit (75%)
Goods	IDA Credit (100% of foreign expenditures, 100% of local expenditures (ex-factory cost), and 83% of local expenditures for other items procured locally)
Consultants for Tech. Assistance & Studies)	IDA Grant (54%), GEF (9%)
Training	IDA Grant (56%), GEF (44%)
Consultants for Local Fixed Term Specialists	IDA Credit (83%)
Incremental Operating Expenses	IDA Credit (83%, 77% and 70% thereafter)

Special Account.

To facilitate timely project implementation, the PMU would establish, maintain and operate 3 separate Special Accounts in USD dollars in a commercial bank under conditions acceptable to IDA.

- Under IDA Credit the initial allocation of the Special Account would be limited to US\$250,000. When the aggregate disbursement and sum of all outstanding special commitments under the Credit have reached the level of SDR 2.0 million, the initial allocation may be increased to the authorized allocation of US\$400,000.
- Under the IDA Grant the initial allocation of the Special Account would be limited to US\$250,000. When the aggregate, disbursement and sum of all outstanding special commitments under the IDA Grant have reached the level of SDR 2.0 million, the initial allocation may be increased to the authorized allocation of US\$400,000.
- Under the GEF Grant the initial allocation of the Special Account would be limited to US\$200,000. When the aggregate disbursement and sum of all outstanding special commitments under the GEF Grant have reached the level of USD 1.5 million, the initial allocation may be increased to the authorized allocation of US\$400,000.

Funds from the Special Accounts will finance all IDA/GEF disbursement categories.

Replenishment of the Special Account from the Credit/Grant account at IDA will be made against withdrawal applications, supported by appropriate documentation or statements of expenditure prepared by the PMU, signed by the authorized officials and submitted to IDA for approval.

Annex 8: Procurement

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

General: The project would follow the concept of community-linked development, a participatory process which involves community groups, and households, and JDCs. The project will facilitate the productive investments that respond to the felt needs of poor rural communities in the project area. NGO facilitators will assist local people to develop subproject proposals. Upon approval, these subproject proposals will provide the basis for agreed interventions and investments of the project funds.

Procedures for Procurement. Procurement of goods and services financed by the IDA Credit/grant will be undertaken in accordance with World Bank Procurement Guidelines. The project will involve minimal procurement suitable for international competitive bidding. Wherever possible, items will be bulked into sizeable bid packages to make procurement competitive and more cost-effective.

Procurement of all works, goods and technical services will follow the Guidelines for *Procurement under IBRD Loans and IDA Credits* published in January 1995, revised January and August 1996, September 1997, and January 1999.

Procurement of consulting services will follow the Guidelines for *Selection and Employment of Consultants by World Bank Borrowers* published in January 1997, revised in September 1997, January 1999 and May 2002. Procurement by Jamaot Development Committees (JDCs) at the cutting edge level and PMU. Project activities not financed by IDA will be procured in accordance with procurement procedures agreed between the respective financing organizations and the Government.

Procurement financed out of community grants will be in accordance with the provisions applicable for Community Participation Procurement (CPP) as defined in para. 3.15 of the Procurement Guidelines and described in detail in the Bank's *Manual for Conducting Very Small-Value Procurement under World Bank /IDA Small Grants, Loans and Credit*, September 22, 2003.

A General Procurement Notice (GPN) will be published in the UN Development Business after the Grant Negotiations.

Procurement Management. The Project Management Unit (PMU) will have overall responsibility for the project, including the management and supervision of project procurement activities. The PMU has the necessary experience, capacity, and capability for this purpose. The PMU will also train the staff of the PCUs so that they can support the process of procurement at all levels of the project.

The major portion of the procurement under the project would be carried out by the common interest groups (CIGs) and households undertaking the subprojects, with community participation in accordance with the Operational Manual. A total amount of US\$11.9 million is allocated for the procurement of works, goods and services for demand-driven subprojects spread over about 46 JDCs during the project life of six years.. Subprojects would consist of small works for rehabilitation / improvement of community infrastructure or for public land conservation and improvement, or involve the procurement of goods required for small income-generating activities by individual households or small groups. It is estimated that CIGs and

households would use approximately 70% of subproject grants for direct purchase of small amounts of inputs (based on three price quotations for items costing more than \$100 wherever feasible), while about 30% would be procured using minor works and national shopping procedures to be described in the draft Operational Manual. The PMU, in collaboration with the PCUs and the JDCs, would be responsible for providing the guidance and supervision necessary to ensure that CIGs and households procure in accordance with the procedures outlined in the Operational Manual. The memorandum of understanding (MOU) between the JDC and the subproject beneficiary will address procurement aspects. The project also includes grants totaling about US\$ 0.5 million through public research institutes to farmers for demonstration nurseries and research trials, and to public institutes for the preservation of indigenous plant specimens. The PMU will directly undertake procurement for all other portions of the project.

Procurement Methods. Project costs, by procurement methods and components, are summarized in Table A. Specific procurement methods to be used under the project will depend on project needs which will be identified as the project is implemented. Therefore, in addition to the procurement procedures for very small procurement procedures described in the Operational Manual, the following methods of procurement will also be used as necessary:

(a) Goods and Services

(i) *International Shopping (IS)* will be used for goods contracts estimated to cost less than US \$ 100,000 per contract and above US\$20,000 per contract

(ii) *National Shopping (NS)* will be used for goods contracts estimated to cost less than US \$ 20,000 per contract.

(b) Civil works.

Minor Works (MW) will be used for civil works contracts, which are all estimated to cost less than US\$50,000.

(c) Consulting Services.

(i) *Quality and Cost Based Selection (QCBS)* will be the preferred method for contracting consulting firms for assignments estimated to cost US\$100,000 or more.

(ii) *Selection Based on Consultants' Qualification* will be the preferred method for contracting consulting agencies for assignments estimated to cost less than US\$100,000.

(iii) *Individual Consultants (IC)* will be hired in accordance with Section V of the WB Consultant Guidelines. Individual consultants will be hired for small assignments of short-term duration and will be selected based on their qualifications.

Prior Review. The following procurements will be subject to prior review by IDA:

- (i) First NCB civil works contract estimated to cost more than US\$50,000 and first minor works contracts;
- (ii) any contract for goods estimated to cost more than US\$100,000;
- (iii) all TORs for international consulting services, irrespective of the contract value;
- (iv) all TORs and contracts with consulting firms costing US\$100,000 or more and all contracts with individual consultants costing US\$20,000 or more.

Post Review. Contracts below the prior review thresholds are subject to IDA's ex-post review, which will be undertaken during supervision missions. Procurement documents, such as bidding documents, bids, bid evaluation reports and correspondence related to bids and contracts will be kept readily available for IDA review during supervision missions or at any other time.

Record Keeping. The PMU, PCUs, JDCs, will maintain up-to date project records, including records of their procurement activities. CIGs and households will also retain receipts of project-

financed purchases for verification by the JDCs. At the levels of the PMU and PCUs, A separate file will be maintained for each contract package, and all procurement correspondence and other relevant documents such as draft and final bidding documents, bids, minutes of bid opening, evaluation reports, minutes of contract negotiations, draft RFPs, draft and final contracts will be kept together for each contract package in the folder. This will facilitate efficient implementation and also allow IDA staff and independent auditors to carry out supervisions and audits more efficiency.

Table A: Project Costs by Procurement Arrangements
(US\$ million equivalent)

	Procurement Method ¹					Total
	ICB	NCB	Consulting Services	Other ²	N.B.F.	
A. Community Grants /a	-	-	0.43	12.02	-	12.45
IDA Credit				(2.44)		(2.44)
IDA Grant			[0.35]	[3.27]		[2.62]
GEF				{3.76}		{3.76}
B. Ag. Research and Demonstration Grants /b	-	-	-	0.44	-	0.44
IDA Credit				(0.27)		(0.27)
GEF				{0.17}		{0.17}
B. Civil Works /c	-	-	-	0.09	-	0.09
IDA Credit				(0.07)		(0.07)
D. Goods /d	-	-	-	0.66	-	0.66
IDA Credit				(0.55)		(0.55)
E. Technical Assistance and Studies /e	-	-	3.41	-	-	3.41
IDA Grant			[1.84]			[1.84]
GEF			{0.31}			{0.31}
F. Training and Dissemination /f	-	-	-	0.61	-	0.61
IDA Grant				[0.34]		[0.34]
GEF				{0.27}		{0.27}
G. Fixed Term Specialists /g	-	-	0.90	-	-	0.90
IDA Credit			(0.74)			(0.74)
H. Incremental Operating Costs /h	-	-	-	1.21	-	1.21
IDA Credit				(0.92)		(0.92)
Total	-	-	4.74	15.05	-	19.79
IDA Credit	-	-	(0.74)	(4.26)	-	(5.00)
IDA Grant			[2.19]	[3.61]		[5.80]
GEF			{0.31}	{4.19}		{4.50}

Note: Figures in parenthesis are the respective amounts financed by IDA Credit; figures in square brackets are the respective amounts financed by IDA Grant; figures in fancy brackets are the respective amounts financed by GEF

1 All costs include contingencies

2 Includes community grants, agricultural research and demonstration grants, minor works, goods to be procured through international and national shopping, training services procured through direct contracting, and incremental operating expenses to be procured through direct purchase

3a Farm productivity, land resource management, and rural infrastructure procured 70% under community participation methods, 15% under minor works procedures, and 15% under national shopping; mobilization grants (except for beneficiary contribution) procured as subset of NGO contracts

3b Plant nurseries and adaptive research trials and demonstrations through grants to farmers, and plots with live specimens through grants to government agencies for their operations

3c 8 minor work contracts for rehabilitation of buildings for institutes and agencies

3d 1 IS contract for vehicles, 4 IS contracts for office equipment, 4 NS contracts for office furnishing, 3 IS contracts for technical & training equipment

3e NGO support to communities (QCBS and CQ), individual advisors, and evaluation studies (QCBS)

3f widely dispersed training and communications activities including direct service contracts

3g local fixed term specialists for PMU and PCUs as individual consultants

3h operation and maintenance through direct purchase

Table B: Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value Threshold (US\$ thousands)	Procurement Method	Contracts Subject to Prior Review (US\$ millions)
1. Works	<50	MW	0.02
2. Goods	>100	ICB	0.10
3. Services	>100	QCBS	0.15
	>20	Individual	0.03

Total value of contracts subject to prior review: TBD

Overall Procurement Risk Assessment: {High }

Frequency of procurement supervision missions proposed: One every 12 months (includes special procurement supervision for post-review/audits)

Table C: Allocation of Credit and Grant Proceeds

	IDA Credit		IDA GRANT		GEF Grant	
	Amount	%	Amount	%	Amount	%
Grants						
Farm Productivity Inv.	1.97	77	-	-	-	-
Land Resource Mgmt.	0.23	4	0.99	17	3.38	58
Rural Infrastructure	-	-	1.87	80	-	-
Mobilization Grants	-	-	0.39	80	-	-
Research & Demonstration	0.25	62	-	-	0.15	38
Civil Works	0.06	75	-	-	-	-
Goods	0.50	83	-	-	-	-
Tech. Assistance & Studies	-	-	1.66	54	0.28	9
Training	-	-	0.31	56	0.24	44
Fixed Term Specialists	0.67	83	-	-	-	-
Incremental Operating Expenses	0.82	*	-	-	-	-
Unallocated	0.50		0.58		0.45	
TOTAL	5.00		5.80		4.50	

* Incremental Operating Expenses are disbursed 83% in years 1 and 2, 77% in years 3 and 4 and 70% thereafter

Annex 9: Economic and Financial Analysis

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Production Benefits.

Current productivity levels are extremely low. The project would produce the following on-farm benefits:

- **Rainfed Crops.** Wheat, barley, potato and forage are major rainfed crops in the project areas. In estimating incremental production it is assumed that crop yields would increase by about 25 to 70% at full development.
- **Irrigated Crops.** The project would support the rehabilitation of minor irrigation schemes and construction of water harvesting structures for irrigation, livestock and domestic use. With the project, it is assumed that there will be a small change in the cropping pattern, basically with the introduction of fodder and vegetables in a limited area. Due to the availability of supplementary irrigation, it is assumed that yields would increase by more than 60 %.
- **Horticulture (Nut and Fruit Trees).** Horticulture has considerable potential as a perennial crop to replace annual cropping on steeply sloping lands. Walnut and apple trees have been demonstrated to be attractive to farmers. Other fruit crops could be introduced depending on demand and market opportunities. Support for marketing studies provided by the project would facilitate the selection of appropriate crops during implementation. Walnut and apple trees have been taken as representative horticulture crops to calculate the potential benefits from horticulture. Yields at full development have been estimated at 25 kg (year 9) and 50 kg (year 10) per tree respectively for walnut and apple.
- **Agro-forestry.** The availability of adequate quantities of fuel wood, and timber for construction purposes, is a problem in most of the project area. Fuel wood and timber requirements can be partially improved by the promotion of small woodlots and tree planting along farm boundaries. Poplar and willow trees have demonstrated to be accepted by farmers.
- **Livestock.** Project interventions would lead to the increased production of livestock herds that would not be harmful to the watershed and would increase farm income. This would be mainly achieved through improvements in grazing management, animal feeding and veterinary services. In estimating incremental benefits of livestock interventions based upon the combination of fodder and livestock resources, it is assumed that income from sales of livestock products would increase by 10-50%

The project would also produce a range of off-farm benefits:

- **Improved Water Supply.** Time saved in water collection can be considered the main benefit arising from the provision of improved water supply. The economic benefits per household is calculated by multiplying the daily timesaving and the opportunity costs of rural labor. In addition to the time saved, the project would also improve the health of the people in the area, hence reducing the incidence of illness. However, this benefit is difficult to estimate.
- **Off-farm Income-Generating Activities.** Good potentials for processing and marketing related to agriculture are slowly emerging in rural areas. However, in order to benefit from these opportunities, mountain farmers need to focus on improving quality, switching the product mix towards higher priced goods with long shelf life, reducing marketing costs and

attempting to develop niche markets for their products. The project would assist producers through the promotion of greater awareness of marketing concepts and the formation of marketing groups by providing guidance in appropriate institutional structures, training in accounts and business management procedures, and assistance with linkages to markets. The institutional support and capacity building component would strengthen the local capacity to identify potential economic activities based on an analysis of market opportunities. Also, the project will support feasibility analysis of agricultural processing activities that are important to the rural economy such as fruit processing, and assist farmers to improve their processing technology at the household and community level.

Analysis of Impacts on Household Income

The cost-benefit analysis of the project considers the following sources of quantifiable benefits:

- incremental farm production from cropping and livestock production arising from on-farm productivity investments, estimated to involve about 6,160 households
- incremental cropping, grazing and orchard production accompanying land management changes, estimated to benefit about 18,350 households
- incremental farm income derived from investments in infrastructure that expand irrigation and user cost savings from other types of investments in rural infrastructure, estimated to benefit about 27,760 households

These figures are net drop-outs of participants due to investment failures, or for other reasons. The analysis has allowed for an attrition of twenty percent among participants over the period of the project's implementation.

Individual benefits and net returns for a number of such activities, investments for which are considered to be scalable to a limited extent, have been estimated in the preparation of the proposed project, as illustrated by the examples of the following table.

Table 1: Examples of Changes in Household Income with the Project (annual at full development)

(US\$)	Farm on "Presidential" Land Implementing Cropping Inv.	Farm on "Presidential" Land Implementing Livestock Inv.	Perimeter Tree Planting with Forage Intercropping	Soil/Water Conservation Structures	Water Supply Development
Subcomponent	Farm productivity	Farm productivity	Land Management	Land Management	Rural Infrastructure
Present Income	966	966	72	146	
Present Costs	427	427	54	85	
Present Net Income	539	539	18	61	
Income with Project	1199	1580	902	210	
Costs with Project	523	818	99	95	
Net Income with Project	676	762	803	116	
Project Investment	45	389	250	107	52
Incremental Income with Project	234	615	829	65	20
Incremental Costs with Project	97	391	45	10	0.80
Incremental Net Income with Project	137	224	785	55	19

It is expected that about 31,000 households would participate directly in one or more project activities.

For the analysis, farm productivity investments are estimated to be on average about US\$ 240 per household. Land management investments are expected to average approximately US\$ 200 per household while the average cost per beneficiary household for investments in rural infrastructure is estimated at US\$ 50.

The analysis assumes that farm productivity investments would be biased toward the relatively better off farmers, especially investments to be financed by local rural financial institutions (Non-Bank Financial Organizations, Credit Operatives, Rural Banks or other), because they would have better access to land. The land resource management investments explicitly specify that poorer households would participate at least in proportion to their numbers in the community. The rural infrastructure subcomponent also specifies that efforts would be made to ensure that poorest are not excluded.

The nature and composition of activities in which households and groups will engage will be known only as implementation proceeds. To evaluate the project as a whole, the information on specific investments has been used to form an expectation of a mean change in income, based on a normal curve. The working paper provides detailed estimates of specific indicative investments and a detailed explanation of the methodology of analyzing project-wide benefits.

Among common features, the values of the analysis are expressed in constant November 2002 values. The time horizon of the analysis is twenty years. The discount rate is assumed to be twelve percent. For a given total number of project participants, the analysis employed the same year-by-year pattern of phasing for investments as shown in the following. This corresponds to the participation of 5 percent of project villages in the first year, 15 percent in the second, 30 percent in the third and 50 percent in the fourth year of project implementation.

Table 2: Phasing of Participating Households

Project Year	1	2	3	4	5	6
Percentage of total Participants						
Initiating Investments	1%	5%	14%	30%	28%	22%

Within each village it was assumed that investments would be completed over three years. The analysis assumes that a maximum of 20 percent of proposed village investments would take place in the first year of a village's participation in the project, 40 percent of investments would be implemented in the village's second year and the remaining 40 percent would be undertaken in the third year.

Some remarks specific to each category of activity follow.

Improvements to farm productivity. Based on the information of the preparation, estimates of expected farm incomes and production costs in the future with and without the project per household are presented in the following table. For technical ease the analysis works throughout with variables of incremental values (figures are rounded).

Table 3: Annual Incremental Farm Income (financial prices)

(US\$/household)	Future With Project Mean Value
Production Value	502
Production Cost	291
Gross Margin	210
Financing for Household	239

The increments in income derive from increases in both crop and livestock productivity which reach full development within four years a household's adoption of new technology. The importance to the performance of the project of achieving this level of increase in productivity is probed in the sensitivity analysis below.

The analysis presumes that about one third of households receiving financing for farm productivity improvements would participate in the establishment and use of NBFOs or other types of local financial institutions.

Land Resource Management and Productivity Improvements. Based on the information of the preparation, mean estimates of expected incremental incomes and costs with the project per household for land management investments are presented in the following table. These investments include soil and water conservation structures, and the establishment of orchards.

Table 4: Annual Incremental Income from Land Management Investments (financial prices)

(US\$/household)	Future With Project At Full Development Mean Value
Investment	200
Production Value	667
Recurrent Costs	45
Gross Margin	622

Although returns to investment can be rather high – the internal rate of return for these investments at these mean values is estimated to be about 40 percent – returns are expected to show substantial variation. Full development is reached within nine years of the investment.

Investments in Infrastructure. Based on the information of the preparation, estimates of expected incomes and costs in the future with and without the project per participating household are presented in the following table.

Table 5: Annual Income from Rural Infrastructure Investments (financial prices)

(US\$/household)	Future With Project Mean Value
Investment	50
Production Value	14
Production Cost	1
Gross Margin	13

These investments would include such things as the rehabilitation or expansion of (branch level) irrigation, miniature hydroelectric facilities, and improvements in supplies of drinking water. Investments in rural infrastructure are expected reach full development within one or two years.

Summary Financial Net Benefits of the Project

Overall Base Financial Performance of the Project. Given the assumptions about the phasing of participating communities and investments, the project is expected to reach full development in project year 16 (calendar year 2020, assuming a project start in 2005). In the base case,

including all other project management and community support costs, the financial internal rate of return (FIRR) for the project is estimated at 22 percent. On the basis of the simulations the mean net present value (NPV) of the project is calculated to be about US\$ 16 million. The project's mean benefit/cost ratio is projected to be approximately 1.9. These strong returns are driven primarily by the investments in farm productivity and the land management improvements. This base result incorporates a 20 percent failure rate/drop-out rate among participants.

Expected Changes in Household Income and Poverty Impacts. The poverty line is estimated at US\$ 1125 per household in the project area, based on official State Statistical Agency figures for 1999 and revised to 2003 values. Absolute poverty is defined at half this cut off, or approximately US\$ 562. By this standard approximately 97 percent of the project area population would be classed as poor, falling between US\$ 562 and US\$ 1125. There are approximately 63,000 households in total in the project area. The distribution of incomes among participating households is assumed to follow the distribution of household incomes in the project area at large.

In the future with or without the project, one can expect some general economic growth to occur in the project area Jamoats, in part fuelled by economic developments elsewhere in the country, in part by remittances from relatives resident in Russia and other CIS countries. With an assumption that real growth in incomes across the range of the distribution of incomes, in excess of population growth, would be about 1 percent per year, about 26 percent of the project Jamoat population, before consideration of project impacts, would be expected to have incomes that are above the poverty line in the year following the completion of the project (the year 2011), when the last group have households are expected to have completed their investments. In contrast, with the project, about 44 percent of the project Jamoat's households would have incomes above the poverty line. None of the project's participating households would be expected to remain below the poverty level. As a result of the project under this scenario, in 2011 about 12,500 more households would move above the poverty line than would be the case without the project. The mean income of this group, however, would not be much above the poverty threshold. At full development of the longer term tree crop investments, the impact would be even greater.

Should no exogenous income growth occur, approximately 17% percent of the project area population would likely have incomes above the poverty line by 2001. That is, if no exogenous income growth occurs among the project area population, the project could be expected in the base case to raise about 9600 households above the poverty line by 2011

Usufruct Value of Land Management Improvements. Over the project period of twenty years the total net present value of incremental returns to land management investments is estimated at US\$ 19.4 million. This figure is equivalent to a total annuity to communities of about US\$ 2.6 million, or approximately US\$ 142 annually per household undertaking the land management investments.

Cost Effectiveness of Project Support. Project management and community support costs, including community mobilization and preparation of investment plans, technical support, PMU and PCU costs and monitoring and evaluation (components II and III) comprise about 34 percent of total project base costs. Per beneficiary these costs amount to about US\$ 190 (US\$ 203 per beneficiary of total project costs including contingencies). Compared to other projects in Tajikistan these costs are reasonable given the remoteness of the project area and the conditions of project area infrastructure and the availability of services. For the FPSP project, management

and support costs per household are about US\$ 650 if only distributed over the area of the 10 project pilot farms, if distributed to all privatized farms in the country that cost falls dramatically. Project management costs as a proportion of total project costs, including contingencies, amounts to less than 15 percent. After allowing for returns to labor, the present value of expected net incremental income from project activities in the base case amounts to approximately US\$ 21.2 million. The total net present value of the costs of project management and of community and technical support is approximately US\$ 4 million, which allows for some continuation of community and technical support past the completion of the project. The total net present value of the costs of components II and III would therefore represent only 19 percent of the present value of the incremental net benefits generated by component I.

Sensitivity Analysis The bulk of project benefits are expected to derive from investments in land management. At full development incremental benefits from land management would account for about 77 percent of total project incremental benefits. Improvements in farm productivity would account for about 21 percent. Farm productivity is expected to increase by about 70 percent under the project, while land management investments are expected to improve the productivity of pastures and adjacent rain-fed cropped areas by about 30 percent. Most of the incremental benefits from land management, however, will derive from the establishment of orchards or the perimeter planting of fruit trees. In terms of recurrent beneficiary costs, however, the situation is reversed: farm productivity improvements account for about 73 percent of total recurrent costs at full development, while land management investments account for about 25 percent. It is possible that the preparation might not have fully assessed recurrent costs for land management. The analysis of the sensitivity of the project's base results therefore focuses on variations in farm and land management investment productivity and their recurrent costs.

Table 6: Sensitivity Analysis of Financial Project Results

	FIRR (%)	NPV (US\$ m)	B/C Ratio	Average Increment to Household Income (US\$)
Base Case	24	19.2	2.0	460
Land Management Benefits 50% Lower	16	6.8	1.2	250
Farm Productivity Benefits 25% Lower	21	16.2	1.9	440
All Benefits 50% Lower	10	1.2	0.9	200
Land Management Costs 50% Higher	23	18.3	1.8	445
Farm Productivity Costs 25% Higher	22	17.3	1.9	455
All Recurrent Costs 33% Higher	21	24.7	1.8	417
All Benefits 25% Lower; All Recurrent Costs 25% Higher	15	7.9	1.4	320
Land Management Benefits Lagged 1 Year	20	15.0	1.7	430
Land Management Benefits Obtained 1 Year Sooner	28	23.8	2.2	460
Other Project Costs 25% Higher	22	18.1	1.8	460

Net returns from farm productivity improvements are moderately sensitive to changes in the base levels of production benefits. A decrease in expected farm productivity benefits of more than 25 percent would result in an operating loss, and presumably households would not take up such investments. Should this be case, the sensitivity analysis allows two years of incurring costs for financing farm changes that are then not pursued, and then assumes that financing for this sub-component is discontinued. The same would be true if incremental farm production costs are more than thirty percent higher than estimated for the base case.

If the cost for land management improvements should increase by as much as 25 percent, the total number of participants would decrease, assuming the budget constraint for this sub-component is binding. A decrease in participants in land management improvements has a more than proportional impact on overall total project net benefits and the so the average increment in household income declines. The overall impact upon the project's performance is not significant, however.

From these exercises, what is evident is that, unless the estimates of the preparation are widely misleading, or it proves impossible to market most incremental farm and land management production – particularly of fruits – the project should produce a satisfactory return and provide an appreciable incentive for households.

Fiscal Impact.

At prevailing average tax rates, the present value of incremental fiscal revenues generated by the project over the period of twenty years is estimated to be more than US\$ 4.5 million in the base case. This assumes the marketing of about 80 percent of incremental farm production and production from land management improvements and the collection of production taxes on 80 percent of incremental production. The analysis applies a sales tax of 4.5 percent and a production tax of 5 percent. An average road tax of 3 percent is assessed on trader turnover, which was estimated at 25 percent above the value of incremental marketed production. There may be some increment in land taxes, but this is not expected to be significant. The collection of an income tax is not expected to apply to the project area. By full development, incremental annual fiscal revenue generated from project, in principle, should approach US\$ 1.5 million (in 2002 constant values). Post-project recurrent government expenditures were estimated at about US\$ 200,000 annually (in 2003 constant values).

Summary Economic Net Benefits of the Project

Methodology. The economic analysis replicates the approach of the financial analysis in border-price equivalent economic values. These are the border price of equivalents of inputs and outputs according to their import or export parity, as appropriate. Price estimates for cereals and fertilizers, have been based on the World Bank's Global Commodity Price Projections June 2000, and valued at an import parity price for the following reasons: (a) the relevance of long-run price projections for the analysis; (b) Government target on increased self-sufficiency in food production, i.e. less dependency on imports; and (c) calculations show minor difference between the derived and current local market prices. The adjustments for economic prices of non-tradable commodities are made using the locally accepted standard conversion factor (SCF) equal to 0.9 to the average local market values. Taxes and financial transfers are excluded from the analysis. As calculated economic prices do not vary greatly from financial prices, results of the economic analysis can be expected to be similar those of the financial analysis.

Overall Economic Base Performance of the Project. As to be expected, the economic results for the project closely follow the financial returns. In the base case, including project management and community support costs, the economic internal rate of return (EIRR) is estimated to be about 22 percent. The net present value of the project would amount to approximately US\$ 15.4 million.

Sensitivity Analysis. The table below provides a summary of the results of a sensitivity analysis, similar in format to the financial analysis presented above, of the expected base economic performance of the project.

Table 7: Sensitivity Analysis of Economic Project Results

	EIRR (%)	NPV (US\$ m)
Base Case	22	15.4
Land Management Benefits 50% Lower	14	4.4
Farm Productivity Benefits 25% Lower	19	12.7
All Benefits 50% Lower	8	-0.4
Land Management Costs 50% Higher	21	14.4
Farm Productivity Costs 25% Higher	20	13.7
All Recurrent Costs 33% Higher	19	12.6
All Benefits 25% Lower; All Costs 25% Higher	13	5.3
Land Management Benefits Lagged 1 Year	18	11.6
Land Management Benefits Obtained 1 Year Sooner	26	19.4
Other Project Costs 25% Higher	20	14.4

The earlier remarks on the sensitivity of the project's financial results apply here as well. For the EIRR to fall below 12 percent would require a combination of significant deviations from base estimates as such as a decrease in all benefits of 30 percent together with an increase in operational and recurrent costs of about 30 percent. Alternatively, given base estimates of net benefits, about two thirds of all investments would need to fail.

Incentive Framework

Experience elsewhere shows that a community-linked approach engenders cost-effective investment, local ownership, improved O&M, and sustainability. Viability is further ensured through subproject preparation and screening, (taking into account economic and financial considerations, as well as inclusion of the poor in public good investments, and other technical, environmental and social criteria). The contribution requirement and the selection of subprojects by communities within fixed budget constraints also provides an incentive which encourages prioritization of investments with maximized marginal returns within a site specific context.

Marketing & Business Issues.

According to the findings of surveys undertaken by the Bank and EBRD, the overall business environment in Tajikistan lags behind many other CIS countries, but has roughly an average score when assessments of several possible obstacles to business growth are considered. These include: over-taxation, over-regulation, crime, infrastructure inadequacies, inefficient finance, judicial laxity and corruption. The obstacles to business development are not perceived to be as bad as they could be, neither are they considered to be insignificant. In Tajikistan, over-taxation and inefficient finance are perceived to be among the most troublesome to business. See the documents at

<http://www.worldbank.org/transitionnewsletter/aprmayjun03/pgs14-17.htm> and
<http://www.usaid.gov/pubs/cbj2002/ee/tj/119-0131.html> .

The absence, or under-development, of financial services is a salient problem within the project area. To some extent the project would loosen this constraint. Other obstacles remain with respect to infrastructure and access to markets. Difficulties in marketing produce outside the project area and a low circulation of money have contributed to the development of an extensive and well-defined barter economy within the project area. To a large extent these arrangements can be expected to continue to serve local needs. The implementation of the project, however, will need to devote sustained attention to improving the movement of goods to markets at the lower ends or outside of the valleys, if local financial institutions are to function. Local

investments in infrastructure under the project will assist in this task, but resources will also need to be channeled to improving marketing information and the quality control.

Environmental Impacts.

The project will have a positive impact on the environment and natural resource base of the project area: increase of soil moisture, leaf litter, grass biomass and organic matter of soils; reduction of sediment loads to the rivers and streams; and a decrease of run-off and soil losses. This would result in three types of economic benefits: (a) the area of land saved and land reclaimed due to the interventions; (b) the value of nutrient recovery in the soil; and (c) increased moisture availability and improved water quality. The third benefit is represented at farm level as it is associated with an increase in crop yields as well as surplus water captured for irrigation, animal and other domestic use through water supply and water harvesting structures.

Agricultural Land Saved and Land Reclaimed. With the project, run-off from the catchment area would be reduced, in turn reducing soil loss. It is estimated that annual loss of arable land in Tajikistan amounts to 20,000-30,000 ha or about 3% of the total arable area. Hence, arable land losses in the project area account for 2,175 ha a year. Assuming that the project interventions would reclaim one-third of land treated in the project area, the annual savings will be nearly 725 ha or approximately 1% per annum. In the valuation of the economic benefits from land saved, presuming mainly rainfed agriculture would be affected; an average net economic income per hectare of rainfed crops (wheat, potato, barley and forage) has been used. Net benefits accrued from one hectare of land saved are estimated to be US\$86.

In addition to the benefits from land saved, severely eroded land, which at present is abandoned, can be reclaimed in a treated watershed. As this type of land has limited scope for agricultural use, it cannot be valued as the net economic benefit generated by crops on arable land. Therefore, it would be correct to value reclaimed land at the value of grass generated from this land. With an average grass production of 1.2 ton per hectare (dry matter) and the economic price of grass at US\$ 31/ ton, the economic benefit per hectare is US\$ 37.

Soil Fertility Improvement. Soil fertility in the project area would be improved as a result of the land treatment that would bring leaf litter and other organic matter back into the eco-system. In addition to this nutrient recovery effect, the process of nutrient recycling would be supported. The productivity gains associated with this recovery are already reflected within the existing economic analysis.

Based on the estimation of organic matter as equivalent of nitrogen per hectare and the economic price of nitrogen, one could theoretically calculate the portion of total economic value per hectare associated with the soil fertility improvement. However, it will be difficult to estimate the build-up of nitrogen, as well as its economic worth.

Downstream Benefits. In addition to the local net benefits accounted for in the analysis above, the project is expected to produce environmental benefits that have not been quantified or that are not at present possible to quantify. These include downstream reductions in damage caused by excess runoff and siltation and accompanying reductions in remedial expenditures. With the project the trend of such costs is expected to decline over time. Also, improvements in the conditions of the watersheds within the project area can be expected to have impacts that extend further downstream of Tajikistan.

Globally, the project would also contribute to the preservation of areas that host significant grassland wild fruit tree species; although, the value of the project in terms of preserving unique

biodiversity under threat may be modest. So, too, the expected contribution of the project to carbon sequestration is not likely to be considerable. Most significantly, the proposed project will provide a valuable opportunity further to develop and deepen experience in the implementation of integrated participatory and sustainable mountain ecosystem management. Such experience is relevant not only to conservation efforts elsewhere within Tajikistan but also to the design and execution of interventions in other locations world-wide where communities need to be engaged in the preservation of fragile mountain habitats. The GEF link to the project will ensure that the examined lessons of the Tajik experience will have a broad dissemination.

Annex 10: Safeguard Policy Issues

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Environmental Assessment.

The Environmental Assessment (EA) comprises an Environmental Management Framework and a Pest Management Plan.

EA Category. The project has been assigned an overall category FI under the World Bank Safeguard Policy OP 4.01, since the project involves funds for subprojects which will be selected by the communities during implementation.

Subproject Environmental Assessment. In accordance with the Environmental Management Framework, subproject assessment will involve one or more of the following steps¹⁵:

- *Initial Environmental Screening:* Depending on the nature and scale of the impacts, the reviewing authority will inform the project proponents about the decision concerning further environmental documentation required for the subproject. Most subprojects are expected either to have no significant adverse environmental impact in which case no further environmental action would be required, or to have adverse environmental impacts for which mitigation measures can be easily designed. The subproject is assessed to have significant. As new larger-scale construction is not envisaged and given the menu of possible interventions, subprojects with significant environmental impacts which may be irreversible or extend beyond the immediate project area are highly unlikely
- *Preparation of EA/EMP,* where required by the screening.
- *Environmental review and approval*
- *Supervision and reporting during implementation.* .

Potential Beneficial Impacts of Project. The environmental impact of the proposed project is expected to be largely positive. The project will not involve any major construction requiring resettlement or land acquisition, nor invest in the construction of dams, new canals or head works that would allow increased water abstraction from main sources. In fact the project aims to increase production in areas already under cultivation, thereby obviating the need to develop new farm land. It is expected that this increase in production will result in returning some of the crop land back to pasture in some cases, and to nature in others. The rehabilitation of the pasture and degraded fragile lands, and planting of woodlots and horticultural crops in the mountains slopes will enhance soil and moisture conservation. The reduction in soil erosion will reduce silt loads in the rivers, resulting in beneficial impacts on the downstream areas. Provision of clean potable water in the problem villages would reduce waterborne disease incidences and improve villager's health.

Potential Environmental Risks and Environmental Management. Training and capacity building support under the project will assure that communities will apply natural resources conservation approaches and pursue environment-friendly practices while designing interventions and prioritizing investment options. Operation and maintenance (O&M) of public assets and infrastructure (such as irrigation systems, village water supply facilities, and power

¹⁵ Depending on the nature of the subproject and readiness of the proposal, the steps 1, 2, and 3 may be combined into one single review and clearance step.

generation and distribution) by community organizations is expected to instill a greater sense of individual and community ownership, perhaps sufficiently to induce interest in adopting measures to protect natural resources and environment in the longer term. However, poor design and implementation could result in potential negative environmental impacts, such as increased surface and groundwater pollution resulting from the possible increased use of pesticides and fertilizers, soil erosion due to poorly managed farm management systems and degradation of adjacent natural habitats and plant species, improper and indiscriminate disposal of animal wastes, environmental damages caused by improper construction activities etc. Risks vary by the type of subproject.

- *Farm productivity investments.* Adverse environmental impacts could occur if inappropriate practices are followed (for example in fertilizer or pesticide application), wastes are not properly disposed of (in case of food processing facilities), or if animal manure is improperly handled and stored. Project owners will need to address these issues through simple mitigation measures that protect water supplies, assure population health and safety, and promote sustainable land use and farming practices. Pest management under the project will follow guidelines provided in the Pest Management Plan (Volume II). The project will provide training to farmers in fertilizer application, integrated pest management, and proper storage and handling of agricultural chemicals. Use of chemical pesticides listed under WHO Class I a and I b and Class II will be prohibited under the project. The project will also provide for monitoring of nutrients and pesticides in water sources where relevant, in order to assure the efficacy of the proposed mitigation measures and enable corrective action where necessary.
- *Land resource management investments.* These investments are expected to be environmentally beneficial and enable biodiversity protection. The project will need to enforce design standards and provide training in planting methods and maintenance needs to ensure that initial erosion and gulying are minimized and that project benefits in the long term are sustained. These investments could be larger, however unlikely to exceed the \$5000 threshold for JDC and WDC clearance. It is expected that environmental management measures could be integrated into the environmental section of the proposal.
- *Rural infrastructure investments.* These investments may involve such activities as provision of drinking water, limited patching and rehabilitation of access and feeder roads, and community-owned mini-hydro or wind driven power generation. It is likely that projects may span more than one Jamoat and be above the \$5000 threshold for WDC clearance (that is, require state level clearance). However, a ceiling of \$50,000 has been established for the subprojects, therefore very large subprojects involving major construction works are not expected. Drinking water supply interventions will focus on rehabilitating or improving existing systems. Due attention will be given to water quality and source protection measures. The project will not involve new roads or paving of unpaved roads. Due attention will be given to enforcing proper design standards (for drainage, erosion control etc.) as well as minimizing impacts during construction. The mini-hydropower systems are expected to be no more than about 30 kW involving very small installations of energy capture devices (turbines, tunnels) on perennial mountain streams in steep slopes. No dam or reservoir construction will be undertaken in the project. The power will be fed to groups of surrounding houses through low voltage cables. Feasibility studies will address environmental feasibility issues and necessary mitigation measures will be outlined as part of

these studies. Overall, the infrastructure projects will require preparation of more comprehensive environmental management plans to be cleared by the environmental authorities at the WDC (raion inspector to review and provide clearance) or State level (State Committee for Nature Protection will provide clearance). Should it happen that large sized projects requiring detailed environmental assessments are financed (although highly unlikely), these will be sent to the World Bank for clearance.

Environmental Monitoring. The project has a monitoring and evaluation subcomponent which will make use of existing data sources (including satellite data), supplemented by data collection within the project and special surveys and assessments undertaken by contracted specialists. Monitoring of environmental indicators will be a part of the overall project monitoring. Periodic analysis of water and soil quality may have to be carried out, and regional laboratories of the SCNP and MOA will be strengthened for this purpose. The PMU environmental specialist will review the environmental status of the project area to assist with the establishment of a baseline for the major environmental parameters and set up a monitoring program for periodic review of the project's impact on the environment. Monitoring the implementation of the environmental mitigation measures in the subprojects will be the responsibility of the raion environmental inspectors. The PMU environmental specialist will provide overall supervision and review bidding documents for inclusion of necessary environmental clauses.

Capacity Support. The project includes support for a full-time environmental specialist within the PMU, training programs for line agency staff, subproject proponents, and other stakeholders, and equipment for simple environmental analysis and monitoring.

Pest Management Plan. The PMP provides a framework for the development of integrated pest management (IPM) program for field crops and livestock in the project watersheds to identify, understand and manage pest problems in the development of community agriculture, reduce human and environmental health risks associated with pesticide use, and protect ecosystem by conserving beneficial agents such as natural enemies of pests and pollinators to increase productivity. The PMP would also enable the communities to critically analyze issues related with introduction of alien invasive species, pesticide residues, and other pesticide use externalities. Collaboration and synergies between this and other projects, regional and international research system and NGOs would be explored and awareness will be raised for a national IPM policy. Implementation of this PMP will lead to compliance with the World Bank Safeguard Policy OP 4.09. The IPM program will hire a national research institution with necessary expertise in field crop/horticultural crop IPM and veterinary entomology capabilities. Based on the research and technical support needs of the project communities, the national institution will develop IPM packages for economically important crop (and livestock) systems, develop and deliver a training program with the aid of demonstrations, adaptive research trials and experiential learning in the farmer fields. This institution will also train the trainers and project specialists and assist the PMU in designing a monitoring and evaluation program. PMU will be the coordinator for the implementation of this PMP.

Stakeholder Consultations. While preparing Environmental Assessment in August-October 2003 there were consultations with stakeholders in each of the project watersheds, as well as at the national level with participation of local people as well as representatives of local authorities, line agencies, other government officials, and NGOs.

Annex 11: Project Preparation and Supervision
TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

	Planned	Actual
PCN review		October 20, 2002 and November 07, 2002
Initial PID to PIC		November 15, 2002
Initial ISDS to PIC		December 10, 2002
Appraisal	February 25, 2004	March 4, 2004 (retroactive)
Negotiations	March 29, 2004	
Board/RVP approval	June 15, 2004	
Planned date of effectiveness	October 30, 2004	
Planned date of mid-term review	December 31, 2007	
Planned closing date	April 30, 2011	

Key institutions responsible for preparation of the project:

Ministry of Agriculture, Committee for Environment and Forestry, Central Bank, Project Management Unit

Bank staff and consultants who worked on the project included:

Name	Title	Unit
T.V. Sampath	Task Team Leader	ECSSD
Jessica Mott	Natural Resource Economist	ECSSD
Shahridan Faiez	Social Development Specialist	ECSSD
Nirmala Saraswat	Environmental Engineer	ECSSD
Naushad Khan	Procurement Specialist	ECSPS
Allen Wazny	Financial Management Specialist	ECSPS
Mark Walker	Legal Counsel	LEGEC
Daniel Gerber	Rural Institutions Specialist	ECSSD
Bobojon Yatimov	Rural Development Specialist	ECSSD
Bekzod Shamsiev	Agricultural Economist	ECSSD
Richard James	E.T. Consultant	MNCA3
Arcadie Capcelea	Environmental Specialist	ECSSD
Jacob Kampen	Agricultural Specialist	AFTS2
Malik Saifullah Khokar	Natural Resource Management Specialist	EASES
Julia Bucknall	Environmental Specialist	ECSSD
Shawki Barghouti	QER Convener	ARD
Talib B. K. Esmail	QER Reviewer	SASRD
Erick C.M. Fernandes	QER Reviewer	ARD
Gottfried Ablasser	QER Reviewer	ECSSD
Jocelyne Albert	QER Reviewer	ENV
Stefano P. Pagiola	QER Reviewer	ENV

Bank funds expended to date on project preparation (including commitments):

1. Bank resources: BB: \$297,000 and BBGEF: \$49,000
2. Trust funds: TF051132: \$143,000 (Bank executed) and TF051133: \$43,000 (Borrower executed)
3. BBFAO: \$200,000
4. Total: \$732,000

Estimated Approval and Supervision costs:

1. Remaining costs to approval: BB: \$30,000 and BBGEF: \$20,000
2. Estimated annual supervision cost for first three years: BB \$160,000 and BBGEF \$50,000

Annex 12: Documents in the Project File
TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT
PROJECT

Project Identification Document FAO

Updated Project Concept Note (November, 2003)

Natural Resources Review

Rural Infrastructure Review

Social Assessment

Environmental Assessment (Vol 1 Environmental Management Framework and Vol 2: Pest Management Plan)

Economic & Financial Analysis Working Paper

Detailed Cost Tables

Project Implementation Plan:

Volume 1: Project Document, (based on Project Appraisal Document and updated as necessary)

Volume 2: Operational Guidance

Detailed Description of Project Area

Community Support and Rural Production Investments Operational Manual (draft)

Non-Bank Financial Organization Operational Manual (draft)

Financial Management and Administrative Procedures Manual (draft)

Procurement Operational Manual (draft)

Project Monitoring and Evaluation Operational Manual (draft)

Annex 13: Statement of Loans and Credits

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Project ID	FY	Purpose	Original Amount in US\$ Millions				Cancel.	Undisb.	Difference between expected and actual disbursements	
			IBRD	IDA	SF	GEF			Orig.	Frm. Rev'd
P069055	2003	EDUC MOD	0.00	13.00	0.00	0.00	0.00	20.61	0.00	0.00
P008860	2002	POV ALLV 2	0.00	13.80	0.00	0.00	0.00	14.59	-0.94	0.00
P075256	2002	PAMIR PRIV POWER	0.00	10.00	0.00	0.00	0.00	11.07	0.00	0.00
P057883	2002	DUSHANBE WS	0.00	17.00	0.00	0.00	0.00	18.28	0.84	0.00
P046047	2001	SAC 2	0.00	50.00	0.00	0.00	0.00	27.62	38.64	0.00
P067610	2000	LAKE SAREZ RISK MITIGATION	0.00	0.47	0.00	0.00	0.00	0.39	0.21	-0.03
P049894	2000	PRIM HEALTH CARE	0.00	5.40	0.00	0.00	0.00	3.10	2.11	0.00
P058898	2000	RURAL INFRA REHAB	0.00	20.00	0.00	0.00	0.00	18.39	7.34	0.02
P059755	1999	IBTA 2	0.00	6.70	0.00	0.00	0.00	2.47	1.30	0.00
P057953	1999	EDUCATION	0.00	5.00	0.00	0.00	0.00	0.07	0.21	0.00
P049718	1999	FARM PRIV SUPPORT	0.00	20.00	0.00	0.00	0.00	9.41	4.97	0.00
Total:			0.00	161.37	0.00	0.00	0.00	126.00	54.68	- 0.01

TAJIKISTAN STATEMENT OF IFC's Held and Disbursed Portfolio In Millions of US Dollars

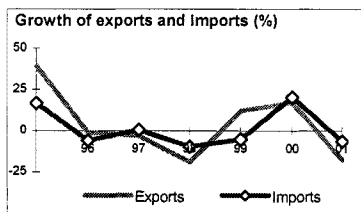
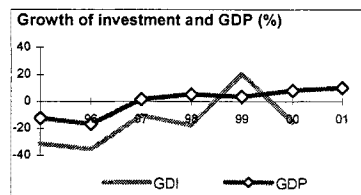
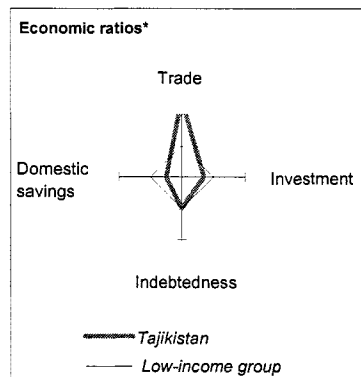
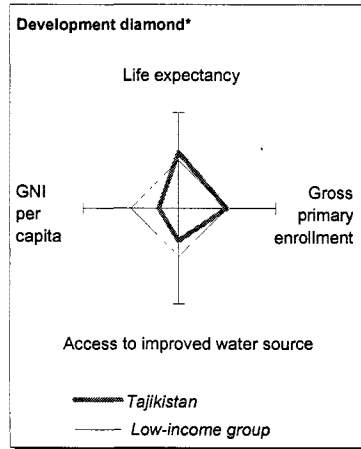
FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2003	Giavoni	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00
0/97/03	Nelson Resources	0.00	3.58	0.00	0.00	0.00	0.00	0.00	0.00
2002	Pamir Energy	4.50	3.50	0.00	0.00	0.00	0.00	0.00	0.00
2002	SEF FOM	0.25	0.00	0.00	0.00	0.15	0.00	0.00	0.00
2000	SEF Holland	0.30	0.00	0.00	0.00	0.20	0.00	0.00	0.00
2002	SEF Telecom Tech	0.35	0.00	0.00	0.00	0.35	0.00	0.00	0.00
Total portfolio:		5.40	10.08	0.00	0.00	0.70	0.00	0.00	0.00

FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic.

Annex 14: Country at a Glance

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

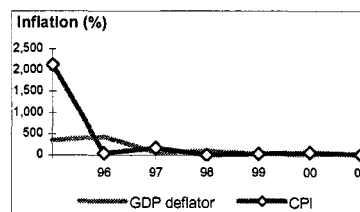
POVERTY and SOCIAL	Europe & Central Asia			Low-income	Development diamond*
	Tajikistan	Central Asia	Asia		
2001					
Population, mid-year (millions)	6.2	475	2,511		
GNI per capita (Atlas method, US\$)	180	1,960	430		
GNI (Atlas method, US\$ billions)	1.1	930	1,069		
Average annual growth, 1995-01					
Population (%)	1.1	0.1	1.9		
Labor force (%)	2.8	0.6	2.3		
Most recent estimate (latest year available, 1995-01)					
Poverty (% of population below national poverty line)	83	..	..
Urban population (% of total population)	28	63	31		
Life expectancy at birth (years)	69	69	59		
Infant mortality (per 1,000 live births)	37	20	76		
Child malnutrition (% of children under 5)	..	..	..
Access to an improved water source (% of population)	51	90	76		
Illiteracy (% of population age 15+)	1	3	37		
Gross primary enrollment (% of school-age population)	95	102	96		
Male	97	103	103		
Female	94	101	88		
KEY ECONOMIC RATIOS and LONG-TERM TRENDS					
	1981	1991	2000	2001	
GDP (US\$ billions)	..	4.5	0.99	1.1	
Gross domestic investment/GDP	..	19.1	14.0	..	
Exports of goods and services/GDP	..	33.2	79.9	61.7	
Gross domestic savings/GDP	..	20.1	9.8	..	
Gross national savings/GDP	..	..	7.6	..	
Current account balance/GDP	..	..	-6.4	-6.8	
Interest payments/GDP	..	..	1.2	3.2	
Total debt/GDP	..	..	92.0	82.9	
Total debt service/exports	..	..	6.7	14.4	
Present value of debt/GDP	..	..	68.6	71.3	
Present value of debt/exports	..	..	85.8	115.5	
(average annual growth)	1981-91	1991-01	2000	2001	2001-05
GDP	0.6	-7.2	8.3	10.2	..
GDP per capita	-2.3	-8.4	8.1	9.2	..
STRUCTURE of the ECONOMY					
	1981	1991	2000	2001	
(% of GDP)					
Agriculture	..	37.9	19.4	24.4	
Industry	..	37.5	25.7	23.6	
Manufacturing	..	26.5	22.6	20.7	
Services	..	24.6	54.9	52.1	
Private consumption	..	70.8	82.0	..	
General government consumption	..	9.1	8.2	8.8	
Imports of goods and services	..	32.2	84.2	73.8	
(average annual growth)	1981-91	1991-01	2000	2001	
Agriculture	-3.7	-4.6	12.4	..	
Industry	3.8	-14.3	13.5	1.4	
Manufacturing	4.6	-11.9	10.2	..	
Services	2.1	3.5	5.1	4.7	
Private consumption	2.3	-3.5	20.6	..	
General government consumption	3.0	-14.1	-10.6	18.8	
Gross domestic investment	-10.7	-16.6	-15.3	..	
Imports of goods and services	..	0.6	20.3	-6.5	



* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

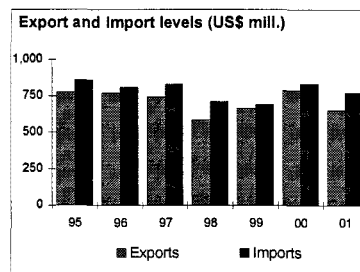
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	..	203.6	60.6	12.5
Implicit GDP deflator	..	99.7	24.0	26.2
Government finance				
(% of GDP, includes current grants)				
Current revenue	13.6	15.2
Current budget balance	2.1	2.9
Overall surplus/deficit	-0.6	-0.1



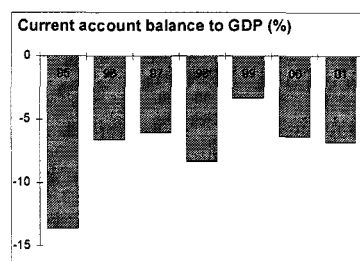
TRADE

	1981	1991	2000	2001
(US\$ millions)				
Total exports (fob)	788	652
Aluminum	424	398
Cotton Fiber	92	72
Manufactures	49	..
Total imports (cif)	834	773
Food	68	..
Fuel and energy	302	198
Capital goods	53	..
Export price index (1995=100)	79	71
Import price index (1995=100)	98	98
Terms of trade (1995=100)	80	73



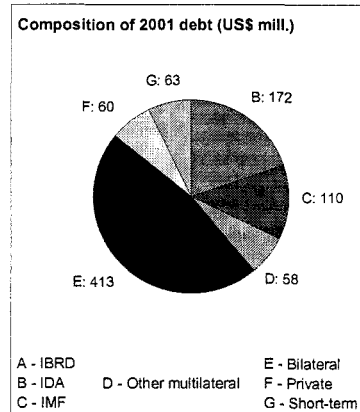
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US\$ millions)				
Exports of goods and services	792	652
Imports of goods and services	834	780
Resource balance	-42	-128
Net income	-58	-28
Net current transfers	37	84
Current account balance	-63	-72
Financing items (net)	92	80
Changes in net reserves	-29	-8
Memo:				
Reserves including gold (US\$ millions)	..	0	87	96
Conversion rate (DEC, local/US\$)	..	3.04E-5	1.8	2.4



EXTERNAL DEBT and RESOURCE FLOWS

	1981	1991	2000	2001
(US\$ millions)				
Total debt outstanding and disbursed	911	876
IBRD	0	0
IDA	143	172
Total debt service	53	94
IBRD	0	0
IDA	1	1
Composition of net resource flows				
Official grants	33	81
Official creditors	11	30
Private creditors	-11	-31
Foreign direct investment	24	9
Portfolio equity	0	0
World Bank program				
Commitments	26	53
Disbursements	23	35
Principal repayments	0	0
Net flows	23	35
Interest payments	1	1
Net transfers	22	34



Annex 15: Incremental Cost Analysis

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

Incremental Cost Analysis and Global Environmental Benefits

Overview

The project objective is to build the productive assets of rural communities in selected mountain watersheds, in ways which sustainably increase productivity and curtail degradation of fragile lands and ecosystems. It would undertake this in four watersheds and cover a population of about 360,000 people, or about 29% of the rural people living in Tajikistan's highland areas, with the intention of establishing the foundation for comparable support eventually reaching all the rural people living in Tajikistan's highland areas.

The GEF Alternative intends to protect globally important Tajikistan mountain ecosystems and preventing land degradation by applying an integrated approach and mainstreaming sustainable land use and biodiversity conservation considerations within agricultural and associated rural investment decisions. The total incremental cost will be approximately US \$ 5.4 million above the estimated baseline, of which US\$ 4.5 would be from GEF and US\$ 0.9 would be from beneficiaries

Context and Broad Development Goals

Mountain land use and degradation. Tajikistan is a mountainous country covering some 141,000 Km². Independence, turmoil, and civil war left it among the poorest countries in the world, but the economy is beginning to grow again. About twenty percent of its 6.3 million population lives in hilly and mountain areas where access to most government services is limited. Most of the 2.5 m ha agricultural land they farm is pasture, only 206,000 ha are in perennial crops and orchards, and there are few significant irrigation systems. Rural poverty, shifts in land management responsibilities, lack of integrated land management, inappropriate agriculture, and poor access to technical support are causing increasing land degradation. Much of the population are now using steep hillsides to grow cereal crops. The breakdown of the irrigation systems so necessary in some areas, farmers' limited access to inputs, and uneven distribution of land has led to a collapse of crop yields. This complex of issues has led farmers to attempt cultivation of wheat for subsistence on steeply sloping land. Cultivation has extended to fragile and unsuitable lands; overall, it has extended about 45,000 ha recently as trees have been removed and steep lands cultivated. Some good-quality spring pasture has been converted to crop production. These changes have made soils vulnerable; 60-70 percent of agricultural land is now considered to be affected by severe soil erosion resulting from poor agricultural practices and localized overgrazing. An increase in gullying is evident, as well as in incidence of landslides and increases the risk of flash flooding in downstream areas. While poverty contributes to land degradation, land degradation contributes 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 have good productive potential if appropriately farmed. In addition to improving life for people in the highlands, utilizing this potential in sustainable ways will also prevent downstream damage and relieve pressure on the lowlands.

Mountain ecosystems. Tajikistan has globally important mountain ecosystems with diverse flora and fauna, including many of economic importance, and under threat. The Republic's vegetative cover is very diverse and includes deciduous, tugai, small-leaf, juniper and xerophilous light forests; thickets of bushes; semi-forest deserts with saxaul, cherkeznik vegetation, semi-bush deserts, thorny-grass steppes, semi-savannas, and meadows.

Pastures, for example, host over 3000 plant species, of which more than 1000 species contribute to the national forage reserve. The most widespread fodder land in Tajikistan is summer pasture, more than 50 percent of all natural pasturable land. These pastures are located in mountain subalpine and alpine zones and are widely represented by tall grass and steppe, meadows prick grasses and deserted pastures. Localized overgrazing, conversion to cereal crops, cutting of interspersed trees and shrubs for fuel has degraded pasture areas near villages.

The wild-growing fruit plants of Tajikistan represent a unique genetic resource for agriculture. The mountain territories of southern and southeastern Tajikistan are 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).

About 1500 of Tajikistan's herb species are used in traditional medicine, and more than 70 in its official medical practice. Medicinal plants face indiscriminate, unscientific, unregulated harvesting, cull and sale.

Forest areas that cover only 3 % of the country's territory. Starting from the early 90s, there has been substantial cutting of trees for firewood, including fruit trees

Tajikistan's diversity of fauna is also very rich. Among mammals, the Bukhara red deer, Menzbir marmot and moufflon (urial) are endemic species to Central Asia. The main game species are the wild boar, Siberian ibex, hare and porcupine, as well as the red marmot, muskrat, nutria, fox, stone marten and badger, and some of these species are being over-exploited. Altogether, Tajikistan's Red Data Book includes 58 invertebrates, 4 species of fish, 21 of reptiles, 37 birds, and 42 mammals. Threats include game hunting of wild mammals.

Threats. The major threats to the Tajikistan mountain lands and ecosystems can be summarized as follows: (a) inappropriate and unsustainable cropping practices on sloping lands; (b) localized overgrazing; (c) deforestation; and (d) over exploitation of biological resources. Rural poverty, lack of integrated land management, inappropriate agriculture, and poor access to technical support are contributing to these threats.

Downstream waters. Tajikistan retains some 10-12% of the water that falls/melts/flows within its territorial boundaries. The great majority of the water is then consumed by the much larger and thirstier agricultures in Uzbekistan, Turkmenistan and Kazakhstan, reducing to a trickle the Amu Darya and Sir Darya. The analytical work conducted under the recently completed GEF-financed Aral Sea Water and Environment Management Project confirmed the role that improved management of the upper watersheds played in better management of the overall river basin. Under the Bank's Farm Privatization and Support Project, the government is drafting legislation and regulation that will encompass all aspects of water use, its extraction, and release back into the system. This project will complement this initiative.

Institutional capacity. In addition to these problems, institutional capacity to appreciate and manage these problems is extremely weak. At both the local and the national levels, the institutions responsible for biodiversity, land management, and community-oriented sustainable development need to be re-oriented and strengthened.

Project Area Watersheds. Specific information of the four project area watersheds (Surkhob, Zarafshan, Toiru, and Vanj) are in the Detailed Project Description Annex. Key features include:

- *Land use.* The project would take place in four highland watersheds mostly above 750 meters covering catchments of over 36,000 km², with agricultural areas covering about 692,000 ha, of which about 597,000 ha is pasture. The watersheds have a population of about 550,000 people (42% of Tajikistan's mountain population). The project would cover 47 of the 64 Jamoats in these watersheds, and would expand to the remaining Jamoats if additional financing from other donors becomes available, as anticipated, after project inception. Project activities and funding would be distributed relatively evenly within the 47 Jamoats, and directly benefit at least half their population. Much of the agriculture has shrunk down to subsistence levels. Three of the four rivers merge into the Amudarya River which then flows into the Aral Sea. Sediment runoff varies between 30 to 2200 t/km²/yr. Mudflows and downstream floods have become more common.
- *Biodiversity.* The pasture lands and wider watershed basins contain a rich mix of plants including rare and genetically valuable grasses, herbs, bushes, and trees. Red book plants in the four watersheds include the Persian binium, Rozenbakh wild leek, Gissarsky rhubarb, Vavilov almond, and Kayon pear. Other important genetic resources include walnut, plum, Sogdiysky nut, Anzyrsky wild leek, Sievers apple, barberry, Zeravshansky nut, black currants, Altai mountain sheep argali, Pontiysky hawthorn, Real pistachio, Lukovichny barley, Pherula kukhistanskaya, Rea nut, Bukharsky almond, Thick-stalked vetch, Borodavchataya cherry, and blackberry. They also provide habitats for rare and endangered animals such as the Dough eagle, Tien Shan sparrow-hawk, Redheaded peregrine, Middle-Asia otter, kadan, weasel, snow leopard, Siberian wild goat, Zeravshansky pheasant, Black stork, Bearded partridge, Indian porcupine, urial, Marco Polo wild sheep, keklik, boradach, desert partridge, kustarnisa, and Golden eagle.

Tajikistan has committed itself to preventing soil degradation and desertification and to conserving biodiversity in its sovereign territory. It is a signatory to several international Conventions: to Combat Desertification (1977); on Biodiversity Conservation (1997); on the Conservation of Migratory Species of Wild Animals (Bonn, 1979), on Climate Change (2000); and, on Wetlands (2000). Soil and biodiversity conservation generally, as well as specific measures related to afforestation, pasture improvements and protection, are considered as priorities for the Government of Tajikistan as evidenced in National Strategy for Combating Desertification (2002) and National Biodiversity Conservation Action Plan (2003). Furthermore, the country's Poverty Reduction Strategy Paper (2002) emphasized the need for adoption of sound agricultural practices, restoration and rational use of natural resources, as well as better management of water resources, as national priorities.

Baseline Scenario

The Baseline Scenario includes: (a) on-going and planned activities undertaken by the Government, in order to improving livelihoods of rural communities while reversing degradation of fragile lands and ecosystems; and (b) the associated contribution by beneficiaries, proportion with this level of external support, and (c) activities and resources being financed by IFIs and other donors.

Government. The Government is trying to implement its agriculture strategy through programs of farm privatization, irrigation and other rural infrastructure, support services for improved agricultural technologies farm and sustainable land management, and improved access to rural finance. However, lack of accountability, inexperience with incentive frameworks and severe fiscal constraints are limiting the extent and in some cases the nature of overall program impacts. Due to very severe budgetary constraints, currently, the Government has not been financing any investment activities in the project area aimed at improving livelihoods or biodiversity and land conservation. It was agreed that during the project implementation period, Government will cover only a part of the recurrent costs, taxes and duties at the level of **US \$ 2.0 million**.

Beneficiaries. It is expected also that the private farmers will contribute to the project financing 20% of subproject costs and to cover the operational and maintenance expenditures of community structures established under the project. In the absence of GEF support this would amount to about **US \$ 1.6 million**.

Donors and IFIs. A number of international NGOs (e.g., Agha Khan Foundation, Mercy Corps International, German Agro Action, ACTAED), and other donors (e.g. UNDP multi-donor Rehabilitation, Reconstruction and Development Program) have established small-scale community driven programs in the project area. Some level of support is likely to continue, although information on the total value of this support is not readily available, and the existence of the project is not expected to affect the level of this support. Recently IFAD, SIDA and CIDA have also expressed interest in providing co-financing to the Bank/GEF project although they cannot make specific commitments within the current project processing schedule. If such support is forthcoming, the scope of the project (i.e., number of highland Jamoats covered) would be expanded retroactively. The IDA financed components of the current Tajikistan Agriculture and Watershed Project it is proposed to be at the level of **US\$ 10.8 million**.

Baseline Costs. The full Baseline Scenario is therefore estimated to cost **US\$ 14.4 million**. It is based on a realistic assessment of financial resources allocated or to be allocated for activities related to livelihoods improvements as well as for the biodiversity conservation and land degradation prevention, and is consistent with the current national development goals and institutional capacity.

Baseline Benefits. The Baseline Scenario outside the social and economic outcomes with regard to land degradation prevention and biodiversity conservation can provide the following:

- 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
- Provide rural infrastructure investments
- 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 the rural production investments. Feasibility and eligibility guidelines include communications, group process, organizational and administrative arrangements, contribution requirements, budget limits, institutional capacity, social, financial, commercial, technical, and environmental considerations. However training and dissemination efforts would be limited.

- Project management and coordination, including evaluation. While evaluation would include environmental elements, but the main focus will be on the social and economic indicators. The evaluation of land use trends would be more limited.

The focus of Government and beneficiaries efforts in the above activities would be on those productive activities that improve livelihoods and have clear and immediate poverty benefits, although they would also encourage more environmentally friendly natural resources use. These Baseline Scenario activities would not be sufficient to halt the negative trends of land and biodiversity degradation trends in the project area.

Global Environmental Objectives and GEF Alternative.

Scope. The project global environmental objective is protecting globally important Tajikistan mountain ecosystems by mainstreaming sustainable land use and biodiversity conservation considerations within agricultural and associated rural investment decisions, providing replicable models for comparable areas throughout the country. This GEF objective is mainstreamed into the project overall development objective and outcomes. The project will take an integrated ecosystem management approach to ensure sustainable land and water use and protect Tajikistan important biodiversity, while contributing to improving livelihoods and reducing rural poverty in selected watersheds of the country. It supports the three GEF strategic priorities, creation of an enabling environment, institutional strengthening, and investments. It aims for synergy among several GEF focal area issues, especially those of land degradation and biodiversity, but also including climate change and international waters. Optimizing benefits by providing opportunities to address these issues within the context of sustainable development, and thus it addresses the Global Environment Facility (GEF) Operational Program (OP) 12: “Integrated Ecosystem Management”, combining the concerns of Land Degradation OP 15: “Sustainable Land Management” Biodiversity OP 4: “Mountain Ecosystems” and OP 13: “Conservation and Sustainable Use of Biological Diversity Important to Agriculture”, International Waters OP 9 “Integrated Land and Water Multiple Focus Area”, and Climate Change OP 6: “Promoting the Adoption of Renewable Energy by Removing Barriers and Reducing Implementation Costs”.

GEF Alternative and Benefits. The GEF Alternative will be build on the Baseline Scenario by substantially increasing the land area (and number of households participating in the subprojects) covered under the land resource management subcomponent to 78,000 ha, or about 10% of the total pasture area in the project Jamoats. Incentive frameworks will be strengthened by linking conservation activities with livelihood benefits, and by linking usufruct rights with stewardship responsibilities. The GEF Alternative will also restore 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 will strengthen technical and institutional capacity. In addition it will address the public awareness and participation issue by supporting a participatory approach to preventing further land and biodiversity degradation, and improving access to information. Experience will be shared at the local and international levels. The higher quality monitoring of land degradation trends will improve accountability and knowledge. The GEF Alternative provides a channel for field level issues to be identified, and if necessary addressed by senior policy makers in the National Level Steering Committee. It will provide a means to integrate site specific and feasibility considerations into small investment subprojects in ways that also address broader landscape consideration. The project will have a positive impact on the environment and natural resource base of the project area: increase of soil moisture, leaf litter, grass biomass and organic matter of

soils; reduction of sediment loads to the rivers and streams; and a decrease of run-off and soil losses. The reduced run-off from the catchment areas will reduce river silting and damage to the downstream irrigation works and water reservoirs which are so important to the livelihoods of not only Tajikistan's population, but also the people in other Central Asian countries. The GEF alternative will provide the necessary funds to catalyze a series of coordinated activities addressing mountain ecosystems and in particular sustainable land management and biodiversity conservation beyond the level that would be supported by the government purely on national grounds. Under the GEF Alternative incremental resources will accelerate and expand the investments beyond what could be supported under the baseline scenario.

Cost. The total GEF Alternative cost is estimated for the 6 years period at the level of **US \$ 19.8 million.**

The GEF Alternative components are:

- **Rural Production Investments** (US\$ 11.9 million; GEF financing – US \$ 3.8 million). This component comprises support for subprojects in farm productivity improvement, land resource management, and rural infrastructure. Financing from GEF, blended with the IDA financing, will accelerate and expand land resource management subcomponent. It will address biodiversity conservation and soil protection through vegetative cover restoration to 78,000 ha, some 57,000 ha above the level that would be supported by the government on purely national grounds. It will promote biological conservation and moisture retention techniques which make the best use of in-situ water and recharge profiles, increase vegetative cover and generally improve 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 leverages an additional US \$0.9 in beneficiary contributions for land resource management subprojects, which would not be forthcoming in the absence of the additional GEF financing.
- **Institutional Support and Capacity Building** (US\$ 4.3 million; GEF financing – US \$ 0.6 million): This component will strengthen scientific institutions, and include 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 will strengthen the capacity for seed and seedling production.. It will include training for communities, community based organizations, interest groups and the Jamoat and Watershed Development Committees. It includes 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 will enable additional funding for the 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.
- **Project Management:** (US\$ 3.6 million; GEF financing – US \$ 0.1 million) The project management component would support the 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 supports the increased management activities associated with the increased amount of land resource management investments, enables 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.

Incremental cost

The project's incremental cost is **US \$ 5.4 million**, - the difference between the Baseline Scenario (**US \$ 14.4 million**) and the GEF Alternative (**US \$ 19.8 million**). The details of the Baseline and the GEF Alternative are presented in the attached Incremental Cost Matrix.

Incremental Cost Matrix

Component sector	Cost Category	US\$ Million	Domestic benefits	Global benefits
<i>A. Rural Production Investments</i>	Baseline	7.2	Increased agricultural production and incomes Increased wood and horticultural products; Increased livestock production; Improved rural infrastructure	Slowing down of negative trends in land and biodiversity degradation, and associated downstream damage in project Jomoats
	With GEF	11.9		
	Incremental	4.7¹⁶	Improved soil fertility Increase moisture availability and improved water quality Reduced soil loss and restoration of agricultural land Reductions in damage caused by excess runoff and siltation and accompanying reductions in remedial expenditures Increased horticultural, wood, and pasture-based livestock production and income	Halting of negative trends in land and biodiversity degradation, and associated downstream damage in project Jomoats. and replicable model relevant for extension in additional areas

¹⁶ Includes US \$ 0.9 million beneficiary contribution leverage by GEF financing

Component sector	Cost Category	US\$ Million	Domestic benefits	Global benefits
<i>B. Institutional Support and Capacity Building</i>	Baseline	3.7	Improved access to know-how, agricultural inputs and suppliers; Improved access to livestock services Mobilized and strengthened communities organizations; Increased capacity for environmentally friendly alternative productive activities;	Raised awareness of globally important mountain ecosystems and on sustainable land and biodiversity conservation management
	With GEF	4.3		
	Incremental	0.6	Enhanced capacity as required to achieve benefits outlined under component A described above.	Preservation of live specimens of indigenous plant varieties Enhanced capacity as required to achieve benefits outlined under component A described above.
<i>C. Project management</i>	Baseline	3.5	Capacity for successful project management and implementation	Limited monitoring of degradation trends
	With GEF	3.6		
	Incremental	0.1	Increased management activities associated with the increased amount of land resource management investments	Increased capacity for monitoring trends in land and biodiversity degradation Increased exchange of international experience
Total	Baseline	14.4		
	With GEF	19.8		
	Incremental	5.4¹⁷		

¹⁷ Includes US \$ 0.9 million beneficiary contribution leverage by GEF financing

Annex 16: STAP Roster Review

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

STAP Roster Technical review

Project Title: " Community Agriculture and Watershed Project"

Country/ Region: Tajikistan/ Central Asia

Reviewer: German Kust

Date: 24 December 2003.

Introduction and general effect of the project.

The main idea of the GEF full-size Community Agriculture and Watershed Management Project in Tajikistan is to provide the indirect influence on the degraded lands and ecosystems in hilly and mountains regions of Tajikistan through support of local communities to increase their ability to reduce critical barriers in rural economy and use of natural resources (land, water, biological). The present overexploitation of natural resources is a result of poverty that in the turn has been resulted after civil war and transition economy. It is necessary to understand that before the break of the Soviet Union, Tajikistan as a former soviet republic has been the region with a subsidy economy and after getting independence the domestic activity came down. So, nowadays, state authorities are seeking for a new form of sustainable development that mainly are rooted in the past and traditions and based on the rural activities.

The establishing and development of these new forms during relatively short period of time is impossible without additional financial and technical assistance from the outside. Otherwise, the natural resources of the country will be completely exhausted over extensive economy and lead to the destruction of the ecosystems, most of which are of macro-regional and global importance.

So, the project does not provide scaled direct interventions in the rural activities but more supports capacity buildings for local communities and NGOs in order to make them positive of themselves through the strengthening of local communities, implementation of the community developed local action plans (or management plans), which take into account the local environmental issues as the main conditions for sustainable development. New capacity buildings will promote (at the level of local model) more balanced exploitation of natural resources, reduce the human impact due to the new environmental friendly technologies of land management and create conditions for their conservation and rehabilitation.

In this case, I consider the project to be eligible in the framework of GEF activities (OP 12 and OP 15), even taking into account the possible risk of the negative environment impact as a result of the increase of rural activity in future.

Key issues

Scientific and technical soundness of the project

Scientific and technical background of the project sounds well. It includes the results of studies of natural and social conditions for project designing, implementation, sustainability and replicability as well as grounds for the engaging of environmental and land management specialists in the PIU and PMU activities.

- I did not find in the project document several things that I think to be important to be reflected:

- As the project is oriented on the experience and knowledge of local communities, the scientific soundness of the prospective activities at this level is weak. Probably, the project team hopes that communities can find the most acceptable decision themselves. Sometimes it could be so especially in the cases of traditional technologies that historically are environmentally oriented. But in cases of use of new techniques and equipment this approach is not right. The better way is if NGOs that work with local communities will offer them to choose appropriate approaches for development from the number of scientifically (ecologically and economically) valid models (desired to be successfully used in resembled conditions). This point proposed a big work on the seeking and verification of such models at the preparatory stage or during the first phase of the project. And here the GEF assistance might be of great importance. Although project contains the mentioning of the "improvements in the productivity of field and horticultural crops... through adoption of advanced technologies developed by CGIAR/TARS", but the mechanisms of their adoption as well as environmental soundness are not clear.
- Here it is necessary to add that scientific soundness of the project could be strengthened if its text (or annex) contain the description of the natural and social mechanisms which help to reduce the impact on the environment. The example of such mechanisms can be cited in the form of principle scheme or in the form of the description of positive effect in similar conditions.

Identification of the global environmental benefits and/or drawbacks of the project

Main global benefit sounds as the improving of mountain ecosystems soil and biodiversity in the ecoregion of global importance. But the direct global environmental benefits of the project seem not to be large either through baseline scenario or GEF alternative. Nevertheless, as the GEF multifocal area project it is supposed to bring regional or local environmental benefits in:

- Reducing land degradation and biodiversity conservation beyond the level that would be supported by the government purely on national grounds
- Protection of natural habitats, especially more effective conservation of globally-significant grassland wild fruit trees species, and of soils
- Contribution to carbon sequestration through conducted afforestation, planting of new fruit trees, mitigating further degradation of vegetation cover and reducing soil erosion.
- Contribution to conservation of regionally important Amu-Darya water basin through reduction of sediment loads to the rivers and streams and a decrease of run-off and soil losses in the upper reaches as a result of the increase of soil moisture, leaf litter, grass biomass and organic matter of soils;
- At the same time the special targeted efforts made on conservation and protection issues are poorly described in the project, although there are pointed in the GEF alternative as: rehabilitation of the pasture and degraded fragile lands in the mountain slopes, enhancing of soil and moisture conservation efficiency with greater wood lot and ground cover, further explore of the possible assistance in ensuring that areas of significant biodiversity importance within the watersheds including existing parks remain preserved with the necessary institutional support to ensure safeguard, etc.

- How the project fits within the context of the goals of GEF, as well as its operational strategies, programme priorities, GEF Council guidance and the provisions of the relevant conventions

As it was mentioned above, the project is closely corresponds to the main GEF objectives, and especially to the Land Degradation focal area. At the same time it follows the goals of the Biodiversity, International Waters, Climate Change and Multifocal focal areas. Proposed activities are mainly under the operational programmes # 12 (Integrated Ecosystem Management) and # 15 (Sustainable Land Management) as well as associated with the purposes of OP#1 (Arid and Semi-Arid Zone Ecosystems), OP#4 (Mountain Ecosystems), and correspond to OP # 13 (Conservation and Sustainable Use of Biological Diversity Important to Agriculture), OP#9 (Integrated Land and Water Multiple Focal Area Operational Program).

The project expected the GEF assistance to strengthen public policy and enabling environment for addressing land degradation, including facilitating integrated and cross-sectoral approaches to natural resource management. As the project formally meets the requirement of generating global environment benefits in two of the GEF focal areas addressing land degradation, it could be considered to be eligible (especially if the global benefits requirements would be strengthened and emphasized in the project proposal).

The project meets the goals of several relevant international Conventions and the country is a signatory to them: UNCCD (1997), CBD (1997) and UNFCCC (2000).

It is necessary to underline, that GEF participation in the project will mainstream the environment importance of the baseline scenario, that is more socially and economically oriented as well as promote the more careful monitoring and evaluation of land management practices. In other words, the attracting of the GEF incremental costs obliges the project itself to be more environmentally oriented. And this is very important in such kind of the investment projects.

Regional context

The project document contains very good description of political, economical, social and legislative specifics of the country. This ensures the prospective success of the proposed activities. As I have mentioned above, the project is more regionally oriented and in this case regional context of the project is the most attractive field for GEF activities. GEF activities will support project component focusing on land conservation techniques and activities as well as integrating sustainable biodiversity management into community priorities. A major focus of the GEF regional activities is to ensure that soil and land conservation techniques are mainstreamed in local agricultural practices. Also GEF component will study the possibility to assist the protection of the regions of significant biodiversity importance including existing protected areas.

The proposed role of regional NGOs in the project is very high. They proposed to be responsible for monitoring and evaluation, for training and gathering on-ground information and for many other things. But the capacities of NGO community in Tajikistan are not described. What are their positive and negative experiences? Are they ready to play the provided role?

Replicability of the project (added value for the global environment beyond the project itself)

Firstly it is necessary to underline that the project approaches themselves replicate the positive Bank's experience in Armenia and Turkey that promote the execution and adaptation of these approaches through their application to the new territories. In Tajikistan the project will involve

up to 40% of population of mountain regions. Future replication of the programme helps to extend the programme to other mountain areas in the country and abroad (e.g. in Kazakhstan, Kyrgyzstan, Uzbekistan et al.). Implementation of farm productivity improvements activities, of community plans on land improvements, as well other successful investments in rural infrastructure, ensures that the results and conclusions of this project will go beyond the experimental sites.

Sustainability of the project and risks.

The proposal contains enough information to analyze project sustainability and risks. Mainly they are connected with the specifics of government at different levels and with unstable economy, lack of banking facilities. For example, the authors of the project proposal understand that "Community involvement needs to be inclusive to minimize the risk of capture by the local elite". Although sustainability analysis takes the big part of the proposal and sounds in different forms throughout the text, I think it is necessary to enlarge it, taking into account all possible negative alternatives. It is more important for such country as Tajikistan, as there has been negative experience during implementation of another endorsed GEF project in the former Soviet Central Asian republics (e.g. "Water and Environmental Management in the Aral Sea Basin").

I see the following additional organizational and environmental causes of those possible risks that have not been pointed in the table of risks or in the commentary:

- "There is no coherent national water strategy" (may cause the risk of unsustainable water management at the local level in future. Can project build capacities for the creation of the strategy?)
- "CAP proposals serve to decentralize government services, and increase the capacity of local communities to take an active role in local development... This concept reduces the role of government line agencies to that of serving farmer interests, rather than controlling resources from a centralized and distant location. This concept is in accord with the Government's policy on decentralization and poverty alleviation" (may cause the risk of the delay of the development of mentioned government's policy in comparison with the increase of local communities independence. What are the governmental obligations and insurance arrangements on this issue? Is it possible to include them in the project agreement? How project will "reduce inappropriate and ineffective government interventions"?)
- "Community involvement needs to be inclusive to minimize the risk of capture by the local elite" (this idea sounds in differing forms in the different parts of the project text). Elite and local officials may not be ready for that the project will bring additional funds and facilities for communities. This may cause the risk that local elite representative will be elected as the chairperson of the community and get "official permission" to spend loans non-purposely. From the other hand, local superiors potentially can counteract project activities and its main idea – to work using community capacities – as it would decrease the abilities of their influence over the decision making. As it is pointed in the project, the Bank has an experience to work in these conditions in the country and first steps are effective. But it is not clear from the project text that the scheme of financing is clarified and local communities and NGOs have a possibility to control disbursements.

In this case the suggestion to organize the "micro-grant" system limited by 200-250 US dollars per family looks very attractive as it helps to plan expenditures. But I did not understand if this sum is real money for distribution among participating families or it will be a kind of voucher

which can be used only for community activities. Both variant seem to be risky as the first does not exclude the spending of money for personal current objectives, and second does not exclude the creation of CAPs under the pressure of local authorities.

I think that in the whole the project suggestions to minimize the risks of the category discussed in the above pp. 2-4 are satisfactory. But I want to make 2 additional suggestions which can help this. First is to create the Internet based Information and Analytical Centre under PMU, which should gather and represent all the information about project implementation in available form. After finalization of the project such centre can support governmental and community structures on the follow-up issues. Also such centre can be responsible for the dissemination of the project results and organize current discussions (not only in the Internet). Second is to establish the position of independent and internationally selected General Consultant who can be responsible for the M&E plans and consultation on the minimizing of risks during project implementation. My own experience shows the efficiency of this kind of work

Secondary issues

Linkages to other focal areas

As it was said above, the project is closely corresponds to the main GEF objectives, and especially to the Land Degradation focal area. At the same time it follows the goals of the Biodiversity, International Waters, Climate Change and Multifocal focal areas.

Linkages to other programmes and action plans at regional or sub-regional levels

The project is closely linked with National Strategy for Combating Desertification (2002), National Biodiversity Conservation Action Plan (2003), and with the country's Poverty Reduction Strategy Paper (2002) that emphasized the need for adoption of sound agricultural practices, restoration and rational use of natural resources, as well as better management of water resources, soil and biodiversity conservation, specific measures related to afforestation, pasture improvements and protection as national priorities.

Degree of involvement of stakeholders in the project

Project defines key stakeholders as village leaders and village members, women, local government representatives, technical staff of the line ministries located primarily at the raion level, National Steering Committee members, staff of the PIUs and PMU and NGOs.

Local people seemed to play the leading role in the project implementation. The role of the governments (state and local) is not clear enough. The project states that their role will be reduced to the end of the project but I am not sure this to be attainable. The role of women traditionally is weak but it hopes to grow.

As I pointed above, the proposed role of regional NGOs in the project is very high. But the capacities of NGO community in Tajikistan are not described.

Capacity-building aspects

The capacity building efforts in different economical, environmental and social aspects are the main idea of the project. So, the project strives in using as much as possible of local resources, in terms of knowledge and capacity, providing training and information to further strengthen that capacity. To my mind, the capacity building aspects description is the best that is made in the project proposal and I can suggest nothing except mentioned above in the upper text. All possible sides of capacity lack and ways to increase it, including:

- developing skills in bookkeeping, infrastructure operations and maintenance, consideration of social and environmental issues, and monitoring,
- capacity building of local common interest groups, local development committees, development of government capacity in providing advice and oversight, and existing administrative and organizational structures to manage activities, as well as acquisition of land use rights and the capacity development in community mobilization and decision making
- strengthening of local technical capacity through training, improvement of farming technologies, providing of improved economic infrastructure to stimulate production, marketing and trading, strengthening the capacity of local Research Center for seeds and seedlings improvement
- greater support for development and capacity building for more remote communities, preserving environmental conditions and conservation measures to ensure sustainable livelihood to the local population, etc.,

are well thought over and developed.

Innovativeness of the project.

I did not find any peculiar innovations in the project concerning environmental facilities. Nevertheless, the project proposes to find new approaches in the management of degraded mountain regions in arid and semi-arid conditions that hope to be used in similar regions in other countries.

On the other hand, the suggested mechanism of disbursement in the conditions of weak developed banking system can be consider as innovation for the application in the countries with transition economy.

Other comments and questions:

A number of acronyms are missed in the list of them. A few of them are not defined completely: PIU or PCU? Implementation or coordination unit? What is correct?

Annex 4, part "Zarafshan Valley.Land use", 1 Para.

Milk is not a crop. Dark gray sierozem soils are not "desert soils". They are specific loss soils on the hills

Questions to the annex 6

- How many PIUs will be organized? Four or two? The organizational diagram describes 4 and the text – only 2 of them. I think 4 are better because although some districts are close to the capital, somebody must work “in the field”.

Questions to the organizational diagram:

- What do different arrows mean? Management, subordination, transfer of the information?
- Lateral contacts are not anticipated.
- Where are VDC, which are mentioned in the text?

Prof. German S. Kust. Deputy Director.
Institute of Soil Science of Moscow State University
and Russian Academy of Sciences

Bank's response to STAP Reviewer

#	STAP reviewer comments	Responses
A. Key issues		
1.	As the project is oriented on the experience and knowledge of local communities, the scientific soundness of the prospective activities at this level is weak. <i>(page 2, bullet 1, first sentence)</i>	Communities will be supported by facilitators (NGOs) to prepare technically viable and environmentally sound project proposals. They will also be receiving guidance and support from the government line ministries and scientific institutions that are expected to comment on each proposed project. This mechanism will ensure that that the technical (scientific) aspects are given adequate attention and longer-term sustainability of the investments is assured.
2.	Although project contains the mentioning of the "improvements in the productivity of field and horticultural crops... through adoption of advanced technologies developed by CGIAR/TARS", but the mechanisms of their adoption as well as environmental soundness are not clear. <i>(Page 2, bullet 1, last sentence)</i>	The CGIAR is an international agricultural research body that has vast experience in researching and promoting environmentally sustainable cropping and farming practices with a half dozen research centers spread across the globe covering most agro-climatic and environmental variations. CGIAR's most recent emphasis under its CAC program has been in developing sustainable agro-practices in dry areas with a focus on minimization of biomass loss and maintenance of landscapes and preservation of local species and varieties. Dissemination of the new technologies will be undertaken by training of participating farmers, the adoption of demonstration parcels. Dissemination will be tied into the RIAS (Rural Information and Advisory System that has been established under the FPSP. The mechanisms of environmental assessment are stipulated in two special papers, attached to the project documents: (a) Environmental Management Framework; and (b) Pest Management Plan.

#	STAP reviewer comments	Responses
3.	Scientific soundness of the project could be strengthened if its text (or annex) contain the description of the natural and social mechanisms which help to reduce the impact on the environment. <i>(Page 2, bullet 2)</i>	The project Environmental Management Framework identifies the likely activities to be financed within the project, and specifies simple mitigation and monitoring measures to be applied for each type of anticipated activity. Temporary minor impact (dust, minor soil loss) can be expected from planting activities, building construction and other works, and where such works are contracted this will be addressed through standard contractual guidelines. Care will be taken to preserve indigenous crop and livestock varieties. Since some of the potential agricultural investments will involve pest management a special Pest Management Plan was prepared that contain sustainable pest control strategies and skills.
4.	The special targeted efforts made on conservation and protection issues are poorly described in the project, although there are pointed in the GEF alternative. <i>(Page 3, first Para)</i>	Since this is a CDD project, at the initial project implementation stage local communities will prepare their own Action Plans, describing all activities, including conservation measures that will be reviewed on environmental soundness and technical feasibility. The project facilitators will support communities in developing adequate activities in this regard.
5.	The proposed role of regional NGOs in the project is very high, but the capacities of NGO community in Tajikistan are not described. What are their positive and negative experiences? Are they ready to play the provided role? <i>(Page 4, second para)</i>	The selection of participating NGOs will be based on a set of demonstrated technical qualifications and capacity criteria. In our view, at the very least in the early stages, it is quite likely that facilitators will be mostly in international NGOs that have already the required experience and proven mechanisms in working with communities and access to the necessary technical know-how. Qualifying criteria have been developed that will be part of the operational manual for this project.
6.	It is necessary to enlarge the sustainability analysis, taking into account all possible negative alternatives, including the negative results of the WB "Water and Environmental Management in the Aral Sea Basin" project. <i>(Page 4, forth Para)</i>	The sustainability analysis is build upon the experience (both positive and negative) gained under several project in the country and in the region(see P. B. 5 of the PAD), including mentioned project. In this regard among proposed risk mitigation measures are the following: (a) timely and appropriate information dissemination and training; (b) early on community all other interested stakeholders involvement.

#	STAP reviewer comments	Responses
7.	There is no coherent national water strategy" (may cause the risk of unsustainable water management at the local level in future). Can the project build capacities for preparing of a such strategy? (Page 4, fifth Para, point 1)	Tajikistan already has a national water strategy, which was developed with the support of the GEF financed Water and Environmental Management Project for Central Asia. The Bank financed Farm Privatization Support Project is now providing support for the development of a national water code that will encompass all aspects of water use, its extraction, and release back into the system. In addition to complementing these efforts, the project is consistent with the Aral Sea Basin Program, which identified upper watershed management as a priority for its second phase. However, it is important to keep potential impacts in perspective. The Tajikistan retains only about 8-10% of the water that falls/melts/flows within its territorial boundaries. The rest flows into the Syr Darya in the north and the Amudarya in the south, where the water is consumed by the much larger and thirstier agricultures in Uzbekistan, Kazakhstan, reducing these two rivers to a trickle when reaching the Aral Sea. While having a coherent water strategy is important, the net benefit of Tajikistan's water strategy for the recharging of the Aral Sea can almost be considered negligible, especially in the current and foreseeable socio-economic context. With increasing prices of water, and the energy necessary to pump it (the government's strategy), the abuses of water as they were practiced under the old system are likely to die out by themselves
8.	What are the governmental obligations and insurance arrangements on this issue (decentralize government services, and increase the capacity of local communities to take an active role in local development) (?) Is it possible to include them in the project agreement? How project will "reduce inappropriate and ineffective government interventions"?) (Page 4, fifth Para, point 2)	The management of financial resource will take place between the PMU and the communities exclusively. No money will flow through the government administration, precisely for the reasons mentioned here. However, while government will not be directly be handling the money, line ministries will be involved through consultation, and will benefit from some capacity building through TA and some minimal goods to help officers better perform their services. To a large extent the project will help local government and line ministries to develop a customer service attitude responsive to the local population yet representing national government policy. The clearing system at various levels (JDC, WDC, SSC) is expected to help resolve problems of inappropriate holding back of proposals by public officials and ensure that proposals adhere to national policy.
9.	It is not clear from the project text that the scheme of financing is clarified and local communities and NGOs have possibilities to control disbursements. (Page 5, point 3)	As indicated above, the communities will be expect to open their own project accounts where project money will be deposited in accordance with schedules and milestones submitted along with proposals. Communities will receive payments in tranches paid out against performance milestones.
10.	The suggestion to organize the "micro-grant" system limited by 200-250 US dollars per family looks very attractive as it helps to plan expenditures, but it is not clear if this sum is a real money for distribution among participating families or it will be a kind of voucher which can be used only for community activities. (Page 5, point 4)	This is an average sum that the project expects to disburse by household. The mechanism is not the same for each activity. For productivity improvements such as small scale processing a maximum up to this threshold may be provided to an individual family. In the case of natural resources management and introduction of new cropping models, the project foresees that at least 9 families would have to agree to work together to reach a critical mass before they can jointly apply make a proposal. This is meant in particular in the case of contour planting, orchards, and in the case of pasture land management.

#	STAP reviewer comments	Responses
11.	Propositions : (a) to create the Internet based Information and Analytical Centre under PMU, which should gather and represent all the information about project implementation in available form and be responsible for the dissemination of the project results. After finalization of the project such centre can support governmental and community structures on the follow-up issues; (b) to establish the position of independent and internationally selected General Consultant who can be responsible for the M&E plans and consultation on the minimizing of risks during project implementation. (Page 5, point 5)	This could be envisaged. At present under two previous World Bank projects, an information dissemination unit (RIAS) has been developed. It may be possible to expand this unit that currently mostly focuses on agricultural productivity improvement to include sustainable mountain range land management, including species preservation and developing an understanding of the value of biodiversity among the local population.
<i>B. Secondary issues</i>		
12.	The role of the governments (state and local) is not clear enough. The project states that their role will be reduced to the end of the project but I am not sure this to be attainable. (Page 6, second para)	The project aims to work with JDCs that are elected registered bodies the local government level. The WDCs and SSC are bodies that will be established for the duration of project. The purpose of these bodies is the project clearance process, and to a large extend, and to get ownership by the various government authorities in the project concept. They are co-terminus with the project. Once the project ends the line ministries, who will have received TA during the course of the project, will take on their regular role in providing guidance, supervising and reporting on local activities.
<i>C. Other comments and questions</i>		
13.	A number of acronyms are missed in the list of them. A few of them are not defined completely: PIU or PCU? Implementation or coordination unit? What is correct? (Page 7, first Para)	They should be all PCUs, there is some inconsistency in our text that we are in the process of correcting.
14.	Annex 4, part "Zarafshan Valley.Land use", 1 Para. Milk is not a crop. Dark gray sierozem soils are not "desert soils". They are specific loss soils on the hills (Page 7)	As above – will revise!!!
15.	Questions to the annex 6 How many PIUs will be organized? Four or two? The organizational diagram describes 4 and the text – only 2 of them. I think 4 is better because although some districts are close to the capital, somebody must work "in the field". (Page 7)	There will be one PCU in each watershed to serve as secretariat to the WDCs and help with general project coordination. This in part explains the relatively high project management costs of this project.
16.	Questions to the organizational diagram: <ul style="list-style-type: none"> What do different arrows mean? Management, subordination, transfer of the information? Lateral contacts are not anticipated; Where are VDC, which are mentioned in the text? (Page 7) 	Arrows represent flow of information There will not be many lateral contacts across watershed unless a specific issue would require it. The watershed as the name suggests is the geographic limitation of project activities. The intention was use the term JDC, and this has now been corrected.

Annex 17: Social Analysis

TAJIKISTAN: COMMUNITY AGRICULTURE AND WATERSHED MANAGEMENT PROJECT

A social assessment was carried out by a local research team under the supervision of an international consultant in eight sites within the watersheds of Zerafshan, Surkhob and Toirsu. The objective of the SA was to identify social development issues and institutional arrangements that the project will address in order to achieve its development objectives. Employing quantitative and qualitative research methods, the SA documented information on the following: 1) levels of household income, assets, consumption and expenditure; 2) people's views toward agricultural production, land and natural resource management and small-scale infrastructure; 3) the development priorities of village residents and leaders of villages, Jamoats and raions and the impact of these priorities on the project; 4) the governing structures of the villages and how villagers perceive them; and 5) people's knowledge and attitudes toward creating a strategic plan for development in their village area and with near-by communities.

Key social issues: The project area is located in zones of very high poverty. The vast majority of the population in the study area can be classified as *very poor* or *poor*. About 74 percent of households surveyed have problems in finding enough food to eat and enough clothes to protect themselves (very poor households). An additional 23 percent of households (poor households) have difficulty in obtaining sufficient clothing. These households suffer from very high unemployment (60 percent, compared to 40 percent national average) and unreliable income from temporary work, emigration/remittances, and small-scale agricultural production. In addition poor infrastructure for the provision of water, electricity and transportation have caused widespread problems related to employment, incomes, health and education. The integrated approach of the project with its focus on income generation, improved agricultural productivity, access to markets, and infrastructure rehabilitation will help to strengthen the livelihood strategies of poor communities. The SA found a close linkage between poverty and environmental degradation, with a majority of respondents reporting that mudslides, soil erosion and, to a lesser extent, silted waterways were a big problem. Mudslides in particular posed a high security risk and have destroyed whole villages in the past. The project will address this issue by offering land-use certificates to households and groups as an incentive for improving land cover on the upper catchment areas. The findings of the SA was used to design the CDD approach of the project. Informal institutions for collective action like the *hashar* are organized through traditional leadership structures of the *mahalla*. Hashars have been used in the past by villages to clean irrigation channels, repair school roofing and tree planting. The project will harness this local capacity for community mobilization to develop the village development plans. Notwithstanding the important role of the *mahalla* as the central organizer of village affairs, the SA found that the voice of local women was not given enough weight in this institution. The project addresses this issue by instituting special procedures in the operational manual to address the concerns of local women in the village development plans. To ensure the inclusiveness of the CDD approach, the project will also introduce targeting mechanisms that will earmark specific percentage of funds for women and other marginal groups in a given community.

Social Development Outcomes: The project is expected to result in increased equity, community empowerment and social inclusion. Labor intensive project interventions such as tree planting and construction will provide poor villagers with income-generating opportunities, while improved agricultural productivity and diversification of income sources will enhance the

livelihood strategy of poor villagers. The project's emphasis on participation will empower local communities to be fully involved in the planning and management of their natural resource base. Project interventions at the local level will be demand driven primarily through the inclusion of all concerned stakeholders in the development of local development plans.

Participatory Approach: 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. The project's approach to sustainable natural resource management rests on the active participation of local communities. Key stakeholders who will 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 (local and/or international) would be contracted to provide technical assistance and services required during the facilitation phase at the village level and the development of the CAPs. The JDCs would be established based on the methodology that has already been successfully used by the UNDP Rural Reconstruction and Development Program in the project area. The project would also identify any existing groups in co-ordination with ongoing donor-funded projects that are active in the area. To provide technical assistance to the communities and help them identify their representatives for the JDCs, the PMU will seek and recruit the services of a facilitator through open advertisement, in the form of an NGO who will have the demonstrated technical and planning capacity to help communities in identifying priorities, developing them into projects and present them to the WDCs for approval.

Collaboration with NGOs or other civil society organizations: Civil society organizations and NGOs have shown interest in the project and were consulted during preparation. These include the German Agro Action, Aga Khan Network, Mercy Corps, RDDP Of the UNDP. CSOs and NGOs are expected to play a role during project implementation in monitoring, training, and awareness raising.

Institutional arrangements to ensure achievement of social development outcomes: The main institutional arrangements to ensure that the project achieves its objectives are the participatory planning at the village level and the formation of JDCs based on a democratically elected membership. At the level of the raion, the WDC and PCU will help ensure coordination between line agencies and effective delivery of goods and services to the project beneficiaries

Measuring of social development outcomes: The project will provide long-term, continuous, and adaptable support to rural development in Tajikistan. Therefore, the results of initial phases of the project must be recorded, assessed, and used to develop additional solutions to problems. The project will use the findings of the SA to design and implement a comprehensive baseline survey that will form the basis for measuring changes in perception, welfare, and incomes associated with the project interventions. A participatory monitoring and evaluation program will be developed to keep track of the project's overall social development outcomes. The Jamoat Development Committees and Raion Development Committees, with the support of PIUs and the supporting NGOs, will help establish and measure the M&E parameters over time and modify them where appropriate. The PMU will ensure that the capacity of these organizations to monitor and evaluate project results exists before responsibilities are transferred to them.