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EMERGENCY PROJECT PAPER

ON A

PROPOSED GRANT

IN THE AMOUNT OF EUR7,416,750
(US\$ 10.01 MILLION EQUIVALENT)

TO THE

REPUBLIC OF TAJIKISTAN

FOR A

PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND
WATER MANAGEMENT PROJECT

May 20, 2010

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CURRENCY EQUIVALENTS

(Exchange Rate Effective 22 March 2010)

TJS 5.92 = EUR 1
US\$ 1.35 = EUR 1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADB – Asian Development Bank	MIRWR – Ministry of Irrigation and Water Resources
CDS – Collection and Drainage System	MOA – Ministry of Agriculture
CIS – Commonwealth of Independent States	NDS – National Development Strategy
EA – Environment Assessment	Oblvodkhozes – Regional Water Authorities
EG – Environmental Guidelines	PAMP – Public Employment for Sustainable Agriculture and Water Management Project
EMP – Environmental Management Plan	PMU – Project Management Unit
FA – Framework Agreement	POM - Project Operational Manual
FM – Financial Management	PRS – Poverty Reduction Strategy
GAO – Gross Agricultural Output	Raivodkhozes – District Water Authorities
GBAO - Gorno-Bardakshan Autonomous Oblast	RFP – Request for Proposals
GDP – Gross Domestic Product	RRS - The Regions Under Republican Subordination
GoT – Government of Tajikistan	SOEs – Statements of Expenditure
GPN – General Procurement Notice	SSB – State Saving Bank
IBRD – International Bank for Reconstruction and Development	TJS – Tajik Somoni (national currency)
IDA – International Development Association	UNDP – United Nations Development Program
IFR - Interim Unaudited Financial Reports	UNECE – United Nations Economic Commission for Europe
IS – Irrigation System	WUA – Water User Association
Jamoats – Local Authorities	
Khukumats – District Administrations	
M&E – Monitoring and Evaluation	
Mahallahs – Local Communities	

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REPUBLIC OF TAJIKISTAN
PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER
MANAGEMENT PROJECT
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A. Introduction

1. This Emergency Project paper seeks the approval of the Regional Vice President to provide a grant of EUR 7,416,750 (US\$ 10.01 million) to the Republic of Tajikistan for the PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT Project. This grant is sought from the European Union Food Crisis Rapid Response Facility Trust Fund (EU-TF) under the Global Food Crisis Response Program.
2. The requested grant would finance a public works program to provide temporary employment to food insecure rural people, by rehabilitating the farm level irrigation and drainage network in selected high food insecurity districts. It thus responds to a significant drop in remittance income due to the global financial crisis, which has severely compromised current household food security, and to the medium-term constraint to domestic food production caused by inadequate drainage and irrigation. The project will also contribute to improved food security at a national level by financing the technical assistance needed to introduce water basin management as the basis for overall management of Tajikistan's water resources.
3. Khatlon oblast has been selected as the project area, first because survey evidence consistently shows it to be the poorest and most food insecure region in Tajikistan, and second because the region has a high agricultural potential that remains unfulfilled due in part to its deteriorating irrigation infrastructure. Within Khatlon the project will target areas where food insecurity is high, and a high proportion of irrigation canal repairs can be done manually. Priority will also be given to districts where land privatization is well advanced, as private farmers have greater incentives to continue maintaining their irrigation infrastructure after project completion. Where feasible the project will be linked to ongoing projects to increase farmer use of improved technology and access to seeds and fertilizer, so that farmers are in the best position to benefit from improved irrigation.
4. Partnership Arrangements. There are no co-financing arrangements.

B. Emergency Challenge: Country Context, Recovery Strategy and Rationale for Proposed Bank Emergency Project.

5. Tajik agriculture GDP grew by 113 percent from 1998-2007 (in US\$), with an associated fall in rural poverty from 87 percent in 1999 to 55 percent in 2007¹. Yet 76 percent of Tajikistan's poor still live in rural areas and low earnings from agriculture are a major cause of rural poverty. Agriculture sector growth has also been slower than overall economic growth in Tajikistan during this period.
6. Low productivity, low incentives and weak markets are the underlying causes of inadequate agriculture sector growth and high rural poverty. Despite considerable potential to raise crop and livestock productivity a combination of weak land use and ownership rights, local government coercion to produce cotton and inadequate competition have combined to reduce farmer incentives to raise output. These problems have been compounded by the historic emphasis on support for cotton and the consequent misallocation of land, labor and finance to

¹ Tajikistan Living Standards Survey (TLSS) 1999, 2003, 2007. Due to changes in methodology the poverty estimates for 2007 are not strictly comparable with the earlier years.

cotton at the expense of more profitable crop and livestock enterprises. From 2004 to 2009 these policies led to a deepening contraction of cotton output and the accumulation of massive unpaid farmer debts to cotton exporters – which severely compromised sector growth. A high proportion of Tajikistan’s estimated one million migrant workers also left rural areas for Russia due to the poor income prospects in agriculture. As most migrants are men, the number of female-headed households rises as migration increases. Government’s resolution of the cotton debt crisis in 2009 has opened the way for reform and improved sector growth.

7. Rural poverty reduction has also been compromised by a succession of exogenous income shocks, including adverse climatic conditions and locust attacks in 2008, the regional food price crisis of 2008-2009 and the global financial crisis of in 2009. Of these shocks, the global financial crisis has had the deepest impact on rural poverty through its impact on remittances. Remittance income was estimated at US\$ 2.67 billion in 2008, equivalent to 51 percent of GDP (National Bank of Tajikistan), of which 70 percent is sent to rural households (TLSS). But these flows fell heavily in 2009 due to a severe contraction of the Russian construction industry – the main source of employment for Tajik migrant workers (CEM, forthcoming). The IMF estimates that remittances fell by 31 percent in 2009, equivalent to US\$ 837 million. A parallel depreciation of the Russian ruble has further reduced the value of remittances, with the overall reduction estimated at 50 percent in local currency². The IMF foresees no significant improvement in 2010.

8. Remittance income is a critical source of household income, especially for the poor. On average, remittances accounted for 15 percent of household income in 2007. More importantly, remittances accounted for 70 percent of household income among the 23 percent of households that received them (TLSS). Recent analysis suggests that the estimated 50 percent overall drop in remittances has resulted in a 5.3 percent increase in rural poverty (Ersado and Umali-Deininger, op cit).

9. Khatlon Region (Oblast) remains the main location of rural poverty in Tajikistan mostly due to the dependence of its rural population on the historically depressed cotton sector. Forty-seven percent of the regions people live below the poverty line (less than US\$1.37/day), and forty percent live in extreme poverty (less than US\$0.87/day)³. Approximately 15 percent of rural households in Khatlon are female headed (TLSS, 2007). The World Food Program (WFP) Food Security Bulletin of September 2009⁴ reports that in July 2009, 32 percent of the entire rural population was food insecure, with 9 percent of rural households experiencing severe food insecurity. WFP has now classified food insecure households in Khatlon and Sughd Regions as the most vulnerable to shocks, and Khatlon and Sughd as priority zones for intervention. The project estimates that the remittance income of rural households in Khatlon fell by approximately US\$ 200 million in 2009, a shock of major proportions.

10. Khatlon’s rural poverty and food insecurity can be reduced. The region has a good agricultural resource base with a large area of arable land, favorable climate, and access to gravity-fed irrigation. But while access to water is adequate, the irrigation systems are generally

² Lire Ersado and Dina Umali-Deininger. “The Global Economic Crisis: Implications for Rural Poverty in Europe and Central Asia.” 2010 (forthcoming).

³ The Tajikistan Living Standards Survey 2007.

⁴ <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp208031.pdf>

in poor condition due to lack of funding for maintenance and rehabilitation -- which lowers crop yields. Farmer ability to use available water efficiently is also constrained by the slow adjustment of irrigation management in the aftermath of farm privatization. The current irrigation and drainage systems were designed for large, collective farms and usually covered several villages. Hence, newly privatized farms often lack their own equipment for controlling and metering water use, and must rely on water distributed through the water gates of the original collective farms. Farmers without their own water gates and water meters are obliged to pay a flat fee for irrigation, and so lack the incentive to use water more efficiently.

Government Strategy and Other Donors

11. To counteract this succession of income shocks, the Government's Anti Crisis Plan (May 2009) has directed a total of 80 million Tajik Somoni (TJS) towards social protection programs, including: (i) rural finance for 30,000 poor households; (ii) adult training centers; and (iii) scaling up a small road maintenance and mini-power construction program. Despite these measures, in-country food-security monitoring systems have identified the need for further interventions to support employment and income generating activities in the rural areas. Government is also seeking to increase food production in the short and medium term to support an estimated 1.4 million food insecure people, including 390,000 severely food insecure as of September 2009.

12. The current program for agriculture sector reform, known as the Road Map, focuses on the cotton sector rejuvenation, land use and ownership, rural finance, improved access to seed and taxation. Until recently, implementation of the Road Map has been slow and its impact limited, but government's decision to write-off farmer cotton debt has raised the impetus for reform. Critically, this has resulted in progress with "*freedom to farm*," a series of measures to improve land use rights and allow farmers to decide what to produce and where and how to market their output. This reform program, which has the status of a formal government decree, is coordinated by the Deputy Prime-Minister and is actively supported by the donor community.

13. The technical assistance funded by the project will directly support two of the six working groups' established by government to lead implementation of the Road Map. Support for the design of a river basin management system will provide a critical input to the working group responsible for irrigation and water resource management, and the associated guidance on institutional reform will assist the working group responsible for reform of the administration of agricultural policy at regional and local level.

14. The European Commission is active in the sector with 22 projects financed through TACIS Track III and DCI (Improving living standard in Khatlon and Sughd), including Water Use and Management; Community Based Development and Livelihood Improvement. In addition to numerous national environmental/water management projects the EU is also implementing a regional project for Central Asia on "Water Governance Project in Central Asia." This project is seeking to establish fair sharing and effective use of scarce water resources through the improvement, implementation and enforcement of water legislation approximated to EU standards. The proposed project will link up with these EC initiatives and ongoing projects.

C. Bank Response: The Project

Brief description of Bank's strategy of emergency support

15. Government has requested the World Bank's assistance to address the threat to food security described above, particularly for Khatlon region. Specifically, the Borrower has requested assistance to establish temporary employment in selected high food insecurity areas in Khatlon as a direct response to the sharp drop in remittance income, to use this employment to rehabilitate irrigation and drainage infrastructure as a means to facilitate increased food crop production in the future, and to improve water resource management policy.

16. The proposed project would be prepared in parallel with the World Bank funded Ferghana Valley Water Resource Management Additional Financing Project (FY10). The objectives of the additional financing project are: (i) increasing the coverage of drained and irrigated areas in Bobojon Gafurov and Kannibodom raions, respectively; and (ii) strengthening the early warning system of the Kayrakkum dam as well as in carrying out a geotechnical study for assessing the risks associated with said dam. This project will cover Sughd Oblast (Region) in the north of Tajikistan, while the PAMP would cover Khatlon Oblast in the south. The Project Implementation Unit of the Ferghana Valley Water Resource Management Additional Financing Project would implement PAMP as well.

17. The proposed project will also complement and enhance the impact of other World Bank operations in Khatlon Oblast. Where feasible, public works will be located in raions where the Additional Financing to Emergency Food Security and Seed Imports Project is active, in order to link improved irrigation to activities to train farmers in improved farming methods and increase their access to farm inputs. The community production groups and women's groups to be trained under this project will thus have better access to irrigation; and their training in cultivation techniques, harvesting, hotbed construction, quality control, processing/packaging etc will result in higher returns. Khatlon will also be the focus of a further component of this project to strengthen the marketing of farm inputs.

18. The project also improves the incentives for local government authorities to implement land privatization. As priority for public works will be given to areas where land privatization is well advanced, raion level authorities will have additional incentive to complete land privatization in order to be eligible for project support.

19. Overall, the project is expected to provide temporary employment of around 459,000 man-days to poor rural people and supplement their incomes by 3.9 million euros, rehabilitate more than 1,825 km of irrigation and 576 km of drainage canals, fortify 2630 spillways, construct 503 outlet gates, repair 14 pumping stations. Once this work is complete it is expected to result in increased food production of around 6,500 tons of cereals and 9,800 tons of vegetables from an area of approximately 49,000 Ha. It will also result in the preparation of a new policy framework for the management of irrigation infrastructure, based on water basin management.

Project Development Objectives

20. The project objective is to generate temporal employment and rehabilitate irrigation and drainage infrastructure in selected districts in Khatlon Oblast as a means to increase household food security.

21. Food security will be increased directly in the short-term through the income earned by food insecure households from public works (food access), in the medium-term through increased crop production as a result of improved irrigation and drainage (food availability), and in the long-term through the project's contribution to improving water resource management policies. These measures complement and extend Government's efforts to mitigate the effects of the financial crisis and the associated reduction of remittance income on the rural poor.

Summary of Project Components

22. The project will consist of three main components:

Component 1: Public Works to Renovate Irrigation and Drainage Infrastructure (EUR6,577,037) to finance minor renovation of on-farm irrigation canals and off-farm drainage infrastructure. These public works will be targeted to areas with high food insecurity and good agricultural potential in order to make the best contribution to sustainable economic development and rural livelihoods. In addition to the public works, renovation and rehabilitation will involve the rental and/or import of auxiliary equipment (excavators, bulldozers, etc.); and the procurement of low-cost, locally available tools such as shovels, wheelbarrows, picks, and other tools.

Component 2: Technical Assistance (EUR444,444). This component will finance preparatory work for the introduction of a Water Basin Management System including: the delineation of water basins, an outline of the new roles and responsibilities and the institutional infrastructure needed to manage these water basins, and recommendations on how to move from the current institutional structure to the new one. A small additional technical assistance input will be implemented to provide recommendations on how the lessons learned in the project can be used for the design and implementation of future public works projects to be financed and managed by government in order to provide temporary employment.

Component 3: Implementation Support, Monitoring & Evaluation (EUR395,269). The Project Management Unit (PMU) will be the main project implementation agency, providing overall coordination and monitoring of implementation progress under the project, and will be responsible for financial management and procurement. A communications strategy will be mounted prior to project commencement to inform rural households and local government authorities of the objectives of the project, the support to be provided and the eligibility criteria for support, and the measures to be taken to prevent corruption. This component will also allocate funds to ensure appropriate EU Visibility. This allocation will finance communication and public awareness activities to profile EU support through press releases, TV and radio broadcasts.

Eligibility for Processing under OP/BP 8.0

23. The project is being processed under OP/BP 8.00 on the grounds that it provides rapid support measures to mitigate or avert the potential effects of imminent emergencies or future emergencies or crises in countries at high risk (OP 8.00 para. 4 (g)). The streamlined procedures under OP/BP 8.00 facilitate rapid processing of the project and the management of procurement, and so allow all civil works under the Project to begin in 2010 and be completed in 2011. This streamlined response will allow the project to generate temporary employment relatively quickly.

24. Consistent with the streamlined procedures under OP 8.0 and subject to the environmental safeguards, fiduciary capacity assessment, procurement arrangements and project processing schedule, all project activities will be finalized within about 18 months of signing trust fund documents. Furthermore, the proposed activities are in full accord with the Global Food Crisis Response Program and the European Union's Food Crisis Rapid Response Facility.

Consistency with Country Strategy (CAS or ISN)

25. The proposed operation is in line with the proposed draft Country Partnership Strategy (CPS), FY10-13, directly contributing to its first and second objectives to: (a) reduce the negative impact of the crisis on poverty and vulnerability by reducing the risk for vulnerable groups through enhanced social protection, and (b) pave the way for sustained post-crisis recovery through improving conditions for sustainable increase in agricultural productivity.

Expected Outcomes

26. In order to improve food security the project will: establish public works programs to generate temporary employment and increase the incomes of poor rural households, renovate irrigation and drainage infrastructure to facilitate increased food crop production, and supporting initial activities to improve water resource management policy.

27. The Indicators are:

- Temporary jobs created by the public works program (number of working days, number of people employed);
- Amount of cash transferred (TJS)
- Average income per beneficiary (TJS per person);
- Water Basin Management (WBM) scheme submitted to the Government.

D. Appraisal of Project Activities

Economic and Financial Analyses

28. The project is expected to generate substantial incremental benefits in terms of increased agricultural productivity as a result of improved irrigation and soil quality. Based on the results

of the economic model, the project will result in net incremental benefits with an economic net present value (ENPV) of about US\$10.4 million or US\$214/ha, and a benefit/cost ratio of 5.33 at a discount rate of 12 percent over the next 15 years. This project also yields an economic internal rate of return (EIRR) of 23.2 percent. Farmers’ benefit from higher annual gross margins from crop production, which increase by US\$87/ha of irrigated land.

Table1. Economic Feasibility

ENPV Net Incremental Benefits (US\$)	10,417,153
ENPV Net Incremental Benefits per ha of Total Irrigation Area (US\$)	214
EIRR	23.23%
Benefit to Cost Ratio	5.33

29. Sensitivity analysis shows that the project is highly sensitive to lower yield projections, with a 20 percent decline in yields decreasing the IRR by 5.5 percent. The project is also highly sensitive to the area that benefits from improved cropping, with a 20 percent fall in cropping area decreasing the IRR by 4.5 percent. The project is moderately sensitive to increased project costs, declining crop output prices and increasing input prices (See Annex 9 for more details).

Technical

30. The underlying constraints to irrigation in Khatlon are due to inefficient water delivery and inadequate drainage, rather than inadequate water availability. There is ample water for low-cost irrigation. The ability of farmers’ to use this water is constrained by the poor condition of the irrigation and drainage network, particularly the secondary and tertiary canals that deliver water to farmers’ fields, and the lack of water gates and water meters. Rehabilitation and repair of this infrastructure will have a significant impact on crop yields. Improved access to water gauges and water meters will allow farmers to improve the efficiency of water use and lower the unit costs of irrigation.

31. The poor maintenance of irrigation infrastructure is not due to lack of knowledge or experience. This work is straightforward in nature and was managed locally for decades before Tajikistan’s independence. However, with independence came dramatic budget cuts, which over time have hollowed out the institutions responsible for managing irrigation infrastructure. The allocation of responsibility for maintenance is also unclear in the aftermath of land privatization. The break-up of the collective farms, previously responsible for maintaining secondary canals, has not been followed by the formation of new institutions to assign this responsibility to the new generation of private farmers. Project resources will help farmers and local government authorities to see the value of agreement on how to assign these responsibilities, while simultaneously creating significant employment opportunities for local communities.

Monitoring and Evaluation

32. The M&E system will be based on the project outcome indicators and targeted annual performance objectives presented in Annex 2. M&E arrangements under the project will be overseen by the PMU. The baseline data set established at project inception (from existing

analytical work as well as Ferghana Valley Project inputs) will be used as the benchmark for comparison with follow-up data collected during project implementation. Progress will be monitored through regular reporting by MIRWR and Administration of Khatlon Oblast to PMU and through Bank supervision missions. The findings of M&E activities will feed back into the implementation process as improved practices.

Fiduciary

33. **Financial Management.** The Project will be implemented by the Project Management Unit (PMU) that is currently implementing the IDA-funded Ferghana Valley Water Resources Management Project, and has established an effective financial management system. The financial management arrangements of the project are reviewed periodically as part of project supervision and found to be satisfactory. The PMU has installed an accounting system that can satisfactorily track the resources and expenditures for the project. The accounting system is capable of recording all transactions and balances, supporting the preparation of regular financial statements, and safeguarding the assets of the project. The current financial management staff of the PMU is trained to maintain the project accounting system that can satisfactorily track the resources and expenditures for the project. The new staff that will be hired under the PAMP will, however, require some additional training in the use of this software, as well as World Bank financial management and disbursement procedures.

34. The overall FM performance and experience of the ongoing Ferghana Valley project is satisfactory and acceptable to the Bank. The audit report and the accompanying project financial statements for FY2008 have been submitted on time and they are acceptable to the Bank. The auditor also issued a Management Letter that raised only one minor issue on internal control system. However, the financial reporting needs to be improved as both 2Q09 and 3Q09 FMRs were submitted with delays and 4Q09 FMR has not been submitted so far. The FM risk at the project level is assessed as Substantial before and Moderate after mitigation measures.

35. While the internal control mechanisms established by the PMU are satisfactory, additional controls will be required for the public works sub-component. These additional controls will be developed and reflected in the manual of financial procedures that will document key internal control mechanisms to be followed in the application and use of project funds and will be an integral part of the revised Project Operational Manual. Specific focus will be on ensuring transparency in the identification and selection of beneficiaries, funds flow mechanisms, reporting and monitoring, and full accountability of project funds.

36. Projects of the IDA portfolio in Tajikistan have been audited by eligible audit firms under a block audit arrangement, and the same will be adopted for the PAM Project. The audit of PAMP will, therefore, be conducted (i) by independent private sector auditors and on terms of reference acceptable to the Bank, and (ii) according to the International Standards on Auditing (ISA) issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants (IFAC). The terms of reference to be used for the Project audit will be prepared by PMU and cleared by the Bank, and submitted to the Committee for Investments before contracting the auditor, under the block audit arrangement. The annual audited project financial statements will be provided to the Bank within six months of the end of each fiscal year

and also at the closing of the Project. The cost of the audit will be financed from the proceeds of the project.

37. The fiduciary risk at the country level is assessed as substantial. As additional mitigation measure, the Public Employment for Sustainable Agriculture and Water Management Project will be subject to one-off fiduciary review, including physical inspections, conducted jointly by the fiduciary team (procurement, financial management and disbursement). The review will be carried out towards the end of the second year of project implementation.

38. **Procurement.** The PMU will have the responsibility for all project-related procurement. A preliminary procurement plan has been prepared and will be agreed during the Negotiations. The PMU's procurement capacity will be strengthened by hiring a procurement assistant. The Project Operational Manual has an Annex on procurement pertaining the Component 1, which will be shared with the other project stakeholders (oblvodkhozes, raivodkhozes, district and jamoat government administrations). The community participation in procurement will be governed by a relevant section of the POM, which will provide detailed description of activities, roles and responsibilities, qualification categories and PMU/WB oversight mechanism.

39. **Anti-Corruption Plan and PMU capacity.** The Anti-Corruption Plan has been prepared as a condition of Negotiations. The Plan governs project specific safeguards and arrangements for enhancing transparency in project implementation activities. The outline of project's Anti-Corruption Strategy is provided in Annex 5. A communications strategy will be mounted prior to project commencement to inform rural households and local government authorities of the objectives of the project, the support to be provided and the eligibility criteria for support, and the measures to be taken to prevent corruption.

40. **Disbursement Arrangements:** The project will follow transaction-based disbursement procedures, including advance to the DA, reimbursements based on full documentation and Statement of Expenditures (SOEs), documentation of the DA based on full documentation and SOEs, direct payments and special commitments). Withdrawals from the Grant Account will be made in accordance with the guidance provided in the Disbursement Letter. The PMU will be required to submit regular withdrawal applications to the Association for replenishment of the Designated Account. Full documentation would be used for expenditures incurred against contracts for works, goods and consulting firms US\$ 100,000 equivalent and above and for individual consultant contract valued at US\$ 25,000 equivalent and above. Expenditures for contracts below these limits would use SOEs. Documentation in support of the SOEs will be retained by the PMU for at least two years after the closing date. This information will be available for review by IDA missions during project supervision and by the project's auditors. SOE will be audited in conjunction with the annual audit of the project.

Social

41. The main stakeholders in the project will be (i) vulnerable households with high food insecurity, including women-headed households and unemployed and seasonally inactive workers; (ii) community level institutions including mahallah committees, social self-mobilizing groups and Water User Associations (where they exist), and (iii) public institutions including the

Ministry of Irrigation and Water Resources (MIRWR), local branches of the MIRWR (oblvodkhozes, raivodkhozes), regional and local khukumats and jamoats, the working groups leading agricultural reform and the donor community. Vulnerable households will benefit from the income earned from public works, and all stakeholders will benefit from more efficient water use and delivery.

42. A comprehensive set of selection criteria will be used to ensure that food insecure households benefit from the public works program. Five suitable districts have already been chosen on the grounds that they exhibit high levels of food insecurity (> 10,000 rural households food insecure), have a high level of irrigation (> 10,000 hectares) and have good agricultural potential. Within these districts eligible irrigation schemes will be chosen at jamoat level according to the following criteria: at least 50 percent of farm land has been privatized, total rehabilitation costs < 250 euros/ha, at least 50 percent of the cost of rehabilitation to be allocated for manual labor, irrigation scheme is technically sound, and the public works complies with all social and environmental safeguards. To ensure that low income, vulnerable people are strongly represented in the work force the wage rate will be set at the prevailing district level wage for unskilled labor. Payment will also be made on a piece-work rate rather than a daily wage as international experience has shown that this approach is more favorable for women.

43. Project design and implementation will emphasize active participation and consultation with all stakeholders as a means to increase ownership and project effectiveness. Local forums for conflict resolution will be set up to protect the interests of actual and potential beneficiaries, with mediation by local institutions. An active public awareness program will also be mounted to ensure that stakeholders are well informed about the projects objectives and activities.

44. To mitigate potential social risks associated with the project, including child labor, project staff will raise awareness of the country's labor safety regulations. Tajikistan's child labor laws are consistent with international conventions on child labor. The project will thus include appropriate measures to monitor compliance with the national legislation concerning labor safety and child labor.

Impact on Employment

45. The total funding available for wages is EUR2,937,037.⁵ Payment for labor will be made according to a strict output-based arrangement calculated on the basis of established labor norms (e.g. 2.5 cubic meters of silt cleaning per work day per person) and the minimum market price for the type of unskilled labor envisaged for the project. Preliminary estimates show that the project will create a minimum of 6,957 temporary jobs or 20,873 man months of employment - equivalent to 459,211 man-days (Table 2). On average, each worker will be paid EUR187 per month. The project will thus have a significant direct impact on employment in Khatlon Oblast and contribute to the goals of the NDS and PRS for 2010-2012.

Table 2: Estimates for Temporary Job Creation

⁵ Only manual works, cost of labor for mechanized works is included in total cost of mechanized works

Total wages	EUR 2,937,037
Estimated* work-day wage	EUR6.4
Total estimated man work days	459,211 days
Total estimated man work months (22 days per month)	20,873 months
Total estimated workers to be employed (for 3 months)	6,957 temporary jobs

*Assuming one skilled brigade leader worker is required to supervise a group of 25 unskilled workers

46. The project will give priority to irrigation and drainage rehabilitation works that are relatively labor intensive. Most of this work will be during the agricultural off-season (late autumn - winter months), allowing under-employed and seasonally inactive farmers' access to an alternative source of income. For the most part, workers will be recruited from villages near the work sites, perhaps with the exception of skilled workers (engineers, operators etc.) who will be brought in from outside the project areas.

Environment

47. *Project environment category.* In accordance with the Bank's safeguard policies and procedures, including OP/BP/GP 4.01 *Environmental Assessment*, the project relates to the Bank's B Category. For such projects it is necessary to conduct an Environmental Assessment and to prepare a site specific Environmental Management Plan. Taking into account the proposed rehabilitation activities would be similar it is proposed to prepare a generic Environmental Management Plan. This EMP will be adjusted to the concrete conditions of the selected irrigation scheme.

48. *Potential environmental and social impacts.* As the project will focus on on-farm irrigation and drainage infrastructure rehabilitation, the civil works will consist mostly of earth moving, concrete works and rehabilitation of existing canal structures, all of which are fairly small scale works. Most of these activities will be done manually and so will not have significant environmental impacts. Excavated sediments and other materials will be dumped beside the irrigation and drainage canals but the environmental impact of this will be negligible.

49. As the selected subprojects are located on existing irrigation areas, none of them will have impact protected areas, critical habitats or culturally or socially sensitive areas. At the same time, improvements to the irrigation systems will raise agriculture production, arrest the declining productivity of irrigated land, protect natural "assets", and prevent the degradation of soil fertility. The reduction in water losses and improved irrigation distribution will also reduce seepage losses from the main canal and excess water distribution, which will benefit the locality through: a lower water table, a lower risk of salinity, and less stagnant water pools in the village causing health problems. .

50. *Impact on International Waterways.* The project area covers the irrigation network that draws water from the Amu Darya River, which flows through Tajikistan and then into the Aral

Sea. Hence, the project triggers World Bank OP 7.50 (Projects on International Waterways). But the proposed investments under the project are not expected to change the volume of extraction/discharge water or the quality of water in these rivers. Based on the above factors, the project team has obtained an exemption from the Bank with regard to exception to the notification requirement under Paragraph 7(a) of the Policy.

51. *Environment Management Plan (EMP)*. The project EMP ensures that the proposed prevention/mitigation measures and monitoring activities identified in the EA will be properly undertaken during the project implementation. The EMP also establishes the necessary institutional responsibilities, proposes a timetable for implementing these activities, estimates their cost and integrates them into the proposed project budget. The EMP will include the following: (a) short description of applicable laws, policies on environment procedures for EA as well as EA institutions and responsibilities; (b) Environmental Guidelines (EG) specifying: (i) potential environmental and social impacts of the rehabilitation of irrigation canals and improvements to drainage infrastructure; (ii) proposed mitigation and monitoring measures to be applied during the project implementation; (c) description of implementing arrangements, including supervision and monitoring, as well as reporting; and (d) analysis of the EA institutional capacity of the implementing agencies along with the proposed technical assistance to adequately implement the EA requirements for the subprojects to be supported.

Safeguard Policies

52. Potential resettlement issues. The project will not support any cleaning of drainage canals associated with possible resettlement issues. As the proposed activities will be implemented exclusively along existing irrigation and drainage canals, there will be no temporary or permanent loss of agricultural lands and/or involuntary resettlement. There is a low possibility that the rehabilitation work could involve destruction of fruit trees planted by farmers along the irrigation and drainage canals to be rehabilitated. This will not arise for on-farm irrigation canals, which will be rehabilitated manually. But tree cutting is sometimes required in order to improve access for agricultural machinery to clean the off-farm drainage infrastructure. This is rare however as trees are usually planted on one side of the canals only to avoid this problem, leaving the other side fully open for machine access. In the event that an irrigation scheme has trees on both sides of the canal it will not be included in the project.

Lessons Learnt and Reflected in Project Design

53. The following lessons have been adapted to Tajikistan from previous Public Works Programs:

- The wage rate will be set at a level which is no higher than the prevailing market wage for unskilled manual labor in the setting in which the scheme is introduced.
- Restrictions on eligibility will be avoided; the fact that one wants work at this wage rate should be the only requirement for eligibility. If rationing is required (because demand for work exceeds the budget available at the wage set) then the program will be targeted to the

most food insecure areas, as indicated by a credible "food security map". Flexibility will be allowed in budget allocations across areas, to reflect differences in demand for the scheme.

- The labor intensity (share of wage bill in total cost) will be as high as possible. The level of labor intensity will depend on the relative importance attached to immediate income gains versus (income and other) gains to the poor from the assets created. This may vary from one project site to another.
- The subprojects will be implemented in poor/food insecure areas, and will try to ensure that the assets created are of maximum value to poor people in those areas.
- Public works will be synchronized to the timing of agricultural slack seasons.
- In order to encourage female participation, the appropriate form of wages is important—for example, women can benefit from output-based rates or task-based wages.
- Transaction costs to the poor are kept low—one important means to accomplish this is through locating project sites close to villages.

54. Conclusions and observations from the implementation of World Bank-funded emergency operation in Tajikistan also suggest the following lessons:

- Where the capacity and resources of local government are limited, project design that involves active local government support should be accompanied by an adequate allocation of project resources to guide and support local government in the implementation of these roles and responsibilities. This is particularly true where there is a need to work quickly to meet a tight implementation schedule, and where aid distribution is on a large scale. Given adequate support, local government authorities can fulfill a critical role in project delivery, at relatively low cost, and so allow a higher proportion of project funding to be used for beneficiaries.
- Effective liaison with national government facilitates not only project implementation but also the transfer of project ownership.
- Short-term emergency projects that reach large numbers of beneficiaries inevitably impinge to some extent on existing, long-term activities of other agencies. Active coordination with these agencies on the selection of target areas and beneficiaries can reduce these conflicts.

Exception to Bank Policies

55. There are no exceptions to Bank policies.

E. Implementation Arrangements and Financing Plan

Institutional and Implementation Arrangements

56. Overall management responsibility for the project will rest with the Ministry of Irrigation and Water Resources (MIRWR) and the Administration of Khatlon Oblast. The Ferghana Water Resource Management Project Management Unit (PMU) will be the leading operational institution for the proposed project and will carry out all project implementation in accordance with a specific Project Operational Manual (POM). The PMU will retain overall responsibility

for project procurement, disbursement and financial management. It will also provide regular reporting and oversee communication and M&E arrangements for the project. An additional Public Works Division will be established within the PMU, which will be adequately staffed for its activities. The Public Works Division will also receive support services from other PMU personnel including the information technology service, procurement, finance officers and others.

57. The local branches of the MIRWR, District Water Authorities (raivodkhozes) will make a preliminary assessment of the demand for rehabilitation of the on-farm and off-farm systems. Decisions regarding intervention, works to be carried out and financing will be taken after discussion within the communities (makhallahs) and local authorities (jamoats).

Financial Management and Distribution Arrangements

58. Financial management of the various project components will be centralized under the Finance Manager. Responsibility for accounting and decision making for disbursements will remain with the FM. Suitably qualified staff will be recruited through a competitive process, following appointment of the FM.

59. All necessary financial management systems and management structures are in place and the PMU Financial Accounting Department is staffed with a Chief Accountant and a Cashier. FM staff capacity will be strengthened, however, to deal with the increased work load and adequate mechanisms will also need to be put in place to ensure effective collaboration and coordination between the PMU, State Savings Bank, and the local raivodkhozes who will be the main implementing agencies. A detailed description of these mechanisms will be provided in the Project Operational Manual.

60. The PMU will be responsible for keeping supporting documentation for all project expenses, especially those reported through SOEs, and for making them available to IDA supervision missions as well as to the auditors.

Procurement Arrangements

61. All procurement activities of the project will be carried out by PMU. The Bank sample shopping documents will be used.

- Procurement of Works: Works contracts to be procured under this project would include: the renovation and cleaning of mainly on-farm irrigation canals and drainage infrastructure. International Competitive Bidding is not envisaged because the works will not only be dispersed in scattered locations but also fall below ICB threshold currently used in Tajikistan.
- Procurement of Goods: Goods contracts to be procured under the project would include: some auxiliary equipment (excavators, bulldozers, etc.), low cost tools such as shovels, wheel barrows, spikes etc.
- Procurement under Community Participation: The procurement procedures used under Community Participation are described in the project operation manual in accordance with

paragraph 3.16 of the procurement Guidelines. Community Participation in Procurement will be used for hiring workers in jamoats.

- **Selection of Consultants:** Consultant services contracts to be procured under this project will include: development of detailed designs for civil works; technical supervision; preparation and introduction of Water Basin Management System including: delineation of water basins, an outline of new roles and responsibilities and the institutional infrastructure needed to manage these water basins and development of recommendations on how to move from the current institutional structure to the new one; PMU staff; annual audits; some surveys on project outcome indicators (including physical, agricultural, social and economic indicators); communication and public awareness activities (press releases, TV and radio broadcasts). Shortlists for consultants' services for contracts estimated to be less than USD 100,000 or equivalent may be composed entirely of national consultants. It is also expected that consulting offices associated with local universities may be included in the shortlists. University-based consultants will not be given preference over other private consultants.
- **Training:** Trainings would be carried out according to annual training plans to be prepared by the PMU and agreed by the Bank. The institutions for trainings would be selected by evaluating which institutional program would be most useful, availability of services, duration of training, and reasonableness cost.
- **Operating Cost:** These would include office rent, utility and communications, translations, bank charges, office supplies, advertisements, photocopying, mail, and travel expenses. Such costs will be financed by the project as per annual budget approved by the Bank and according to the implementing agency's administrative procedures, which were reviewed and found acceptable to the Bank. Operating costs will not include salaries of civil servants.

62. Technical Issues of Procurement Decisions: The PMU will be responsible for developing technical specifications or TORs in collaboration with implementing agencies and national or international consultants that may be hired to provide needed assistance.

63. Filing and Records Keeping: The PMU will set up adequate filing and record keeping systems during implementation of FVWRMP project, including hard and electronic copies of related procurement documents. Agreed reporting formats are included in the project operation manual.

F. Project Risks and Mitigating Measures

RISK	RATING	MITIGATION MEASURE
(1) The government's sub-optimal agriculture policy framework remains unchanged or changes slowly	Before mitigation: S After mitigation: M	Implementation of the IMF's Poverty Reduction and Growth Facility (PRGF) program; Strong donor pressure; The project will select project districts with better agricultural policy framework: out of 25 districts in Khatlon, 8-9 districts show relatively good and improving agricultural policy framework.
(2) Government entities (central and local level) do not perform to the expected standard; different	Before mitigation: S	High priority project for the Government; Frequent monitoring and supervision by the World Bank missions; Deputy Prime Minister and Government of Khatlon Objectives

government agencies fail to cooperate and/or resolve operational problems in a timely manner.	After mitigation: M	and Government of Khatlon Oblast have pledged their full support to resolving day-to-day operational matters.
(3) Financial management arrangements are generally satisfactory, but funds flow arrangements under community participation may involve additional risks.	Before mitigation: S After mitigation: M	Funds flow mechanism and additional control measures will be described in the POM, Information about beneficiaries and worker remuneration will be posted on information boards in Jamoats. In addition, there will be a local NGO contracted for monthly sample spot checks of workers' time sheets.
(4) Procurement risks: delays, low levels of competition, inadequate contract management, poor quality of works.	Before mitigation: H After mitigation: S	Careful procurement planning and realistic scheduling; advanced preparation of technical specifications or TORs; further procurement training would be provided during project implementation; close Bank supervision and monitoring, particularly from the country offices. Careful procurement packaging to foster competition; wide and advance advertising; proactive search and contact to potential suppliers, contractors or consultants. Regular physical inspections by PMU and Bank supervision mission.
(5) Possible social issues: conflicts, disputes and lack of interest in participation	Before mitigation: M After mitigation: N	Community involvement in planning and implementation; Awareness campaign to reduce potential for conflict; experienced social scientists involved in project preparation.
(6) Low sustainability of investments in irrigation works.	Before mitigation: S After mitigation: M	Areas with good agriculture potential and support to further progress with farm restructuring are likely to improve sustainability of investments. Strong attention to parallel/on-going projects on training of communities in sustainable management of community resources.
(7) Possible use of child labor in project implementation.	Before mitigation: M After mitigation: N	Tajikistan has adequate child labor laws, consistent with international conventions on child labor; Project will include appropriate measures to monitor and raise awareness about utilization of child labor.
(7) Tight implementation period for the project (Closing Date is December 31, 2011)	Before mitigation: S After mitigation: M	The PMU will make full use of advance procurement arrangements and higher than normal thresholds for Shopping and Consultants' Qualification Selection. The PMU will also benefit from the World Bank's implementation support in early community mobilization efforts. The project TTL will be located in the field during project implementation period.
Overall Risk Rating	M	

H – High; S – Substantial; M – Moderate; N – Negligible

G. Terms and Conditions for Project Financing

64. As a condition of effectiveness, the PMU will be required to submit the draft Project Operational Manual for the World Bank's review.

65. The project will be financed by the EU Food Crisis Rapid Response Facility Trust Fund Grant to the Republic of Tajikistan. The following should be included in the Project's Legal Agreement –

- *EC Visibility and Verification Clause [see also Annex I: Joint Visibility Guidelines Relating to EC-funded WB-administered Trust Funds and Co-financings]*

[2.[04]. **Donor [Visibility] [and] [Verification]**. [(a)] The Recipient shall take or cause to be taken all such measures as the World Bank may reasonably request to identify publicly the [Donor's] support for the Project.

[(b) For the purposes of Section 2.09 of the Standard Conditions, the Recipient shall, upon the World Bank's request, [enable][take all measures required on its part to enable] the representatives of the [Donor(s)] to visit any part of the [Recipient's][Member Country's] territory for purposes related to the Project.]

- *Relevant eligible expenditure categories to be reported to the EC [see also Annex 2: Financial Reporting and Expenditure Categories]*

Annex 1: Country and Sector Background
REPUBLIC OF TAJIKISTAN
PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER
MANAGEMENT PROJECT

Agriculture Sector

1. Agriculture makes a significant contribution to Tajikistan's economy, with 23 percent of Gross Domestic Product (GDP) - the highest contribution among CIS countries after neighboring Kyrgyzstan. It also provides a livelihood for most of the population, employing nearly 75 percent of the work force. Agriculture GDP grew by 113 percent from 1998-2007 (in US\$), with an associated fall in rural poverty from 87 percent in 1999 to 55 percent in 2007⁶. Yet 76 percent of Tajikistan's poor still live in rural areas and low earnings from agriculture are a major cause of rural poverty. Sector growth has also been slower than overall economic growth in Tajikistan during this period. Agriculture value added per worker was only \$210 in 2003-2005, one-tenth of agricultural productivity in Russia and less than 1 percent of agricultural productivity in the USA.
2. Mountains and hills cover more than 90 percent of Tajik territory. Agricultural land is limited as a result, with approximately 860,000 hectares of medium-fertility arable land, including 100,000 hectares under perennial crops, and 3.8 million hectares of unimproved pasture grazing land. This is equivalent to 0.11 ha of arable land/capita (excluding perennial crops) – which is low in both absolute terms and relative to other CIS countries (lowest among CIS after Georgia). Pasture resources are more abundant, at 0.56 ha/capita, but 90 percent of pasture resources are in distant areas and are used for seasonal grazing. The high corresponding pressure on agricultural land has resulted in increasing land degradation.
3. The climate is continental and there is a range of ecosystems, from desert and steppe in the west to alpine and meadow zones in the east. Both the population and agricultural production are concentrated in the valleys in the west of the country. Of the main agricultural regions Khatlon oblast in the south is characterized by irrigated lowland and an emphasis on cotton and cereal production. Citrus is also grown successfully. Sughd oblast in the north relies more heavily on pump irrigation to produce cotton, cereals, fruit and vegetables. The Regions Under Republican Subordination (RRS) in the center of the country, including the productive Hisor valley, benefit from their proximity to the urban markets of Dushanbe. Land reform is also more advanced in the RRS region and the irrigation network is in better condition. The sparsely populated Gorno-Bardakshan Autonomous Oblast in the Pamir has very little arable land.
4. Land reform is slow but small-scale, private dehqan farms now occupy more than half of arable land. The remaining area is occupied by larger, collective dehqan farms, and a small number of state farms used for research, seed production, and animal breeding. Farmers still lack full land use rights, however, which reduces their incentives to raise productivity.

⁶ Tajikistan Living Standards Survey (TLSS) 1999, 2003, 2007. Due to changes in methodology the poverty estimates for 2007 are not strictly comparable with the earlier years.

5. Cotton production has historically been the focus of agricultural policy and continues to receive priority for resources, even though it now accounts for less than 10 percent of agriculture value-added. Tajikistan has the resources and the potential for a more diverse agriculture sector, based on the production of cereals, cotton, fruit, vegetables and livestock products. Farmers are slowly responding to this potential by switching from cotton to other crops (Table 1), but they face many constraints including poorly functioning irrigation systems.

Table 1. Area Cultivated by Crop (ha)

	1999	2004	2005	2006	2007	2008	Change 2004-08
Cereals	402,739	403,734	395,565	401,912	396,880	438,152	34,418
Cotton	247,800	293,601	288,655	262,893	254,830	237,130	-56,471
Vegetables	34,229	31,964	33,429	35,768	39,110	37,162	5,198
Potatoes	20,456	28,591	27,483	27,935	29,752	28,676	85
Melons	11,828	10,603	9,193	9,110	11,118	11,570	967
Fruit	54,553	78,663	83,080	90,635	91,361	95,115	16,452
Grapes	31,469	34,084	34,468	35,677	36,301	35,401	1,317
Total	803,074	881,240	871,873	863,930	859,352	883,206	1,966
<i>Memo:</i>							
Cotton	247,800	293,601	288,655	262,893	254,830	237,130	-56,471
Non-Cotton	555,274	587,639	583,218	601,037	604,522	646,076	58,437

Source: Goscomstat

6. Crop yields have increased over the last decade particularly for non-cotton crops such as potato, fruits and vegetables (Table 2), although they remain low by international standards. There is considerable room to raise yields and productivity further through better crop management, higher input use, and improved irrigation.

Table 2. Trends in Crop Yields 1999-2008 (ton/ha)

	1999	2004	2005	2006	2007	2008	% Change (99-08)
Cereals	1.20	2.21	2.36	2.27	2.35	2.15	79.62
Cotton	1.27	1.90	1.55	1.67	1.65	1.49	16.82
Potato	11.71	18.44	20.20	20.54	22.25	23.68	102.19
Vegetables	11.25	21.32	21.49	21.24	21.35	24.32	116.09
Melons and gourds	7.09	14.19	18.52	23.95	22.86	24.68	248.31
Fruits	1.42	1.84	1.79	2.30	1.72	2.76	93.77
Grape	1.70	2.73	2.63	3.00	3.22	3.33	95.84

Source: Goscomstat

7. This combination of low productivity, low incentives and weak markets is the underlying causes of inadequate agriculture sector growth and high rural poverty. Despite considerable potential to raise crop and livestock productivity, weak land use and ownership rights, local government coercion to produce cotton and inadequate competition have combined to reduce farmer incentives to raise output. These problems have been compounded by the historic emphasis on support for cotton and the consequent misallocation of land, labor and finance to

cotton at the expense of more profitable crop and livestock enterprises. From 2004 to 2009 these policies led to a deepening contraction of cotton output and the accumulation of massive unpaid farmer debts to cotton exporters – which severely compromised sector growth. A high proportion of Tajikistan’s estimated one million migrant workers also left rural areas for Russia due to the poor income prospects in agriculture. As most migrants are men, the number of female-headed households rises as migration increases. Government’s resolution of the cotton debt crisis in 2009 has opened the way for reform and improved sector growth.

8. Rural poverty reduction has also been compromised by a succession of exogenous income shocks, including adverse climatic conditions and locust attacks in 2008, the regional food price crisis of 2008-2009 and the global financial crisis of in 2009. Of these shocks, the global financial crisis has had the deepest impact on rural poverty through its impact on remittances. Remittance income was estimated at US\$ 2.67 billion in 2008, equivalent to 51 percent of GDP (National Bank of Tajikistan), of which 70 percent is sent to rural households (TLSS). But these flows fell heavily in 2009 due to a severe contraction of the Russian construction industry – the main source of employment for Tajik migrant workers (CEM, forthcoming). The IMF estimates that remittances fell by 31 percent in 2009, equivalent to US\$ 837 million. A parallel depreciation of the Russian rouble has further reduced the value of remittances, with the overall reduction estimated at 50 percent in local currency⁷. The IMF foresees no significant improvement in 2010.

9. Remittance income is a critical source of household income, especially for the poor. On average, remittances accounted for 15 percent of household income in 2007. More importantly, remittances accounted for 70 percent of household income among the 23 percent of households that received them (TLSS). Recent analysis suggests that the estimated 50 percent overall drop in remittances has resulted in a 5.3 percent increase in rural poverty (Ersado and Umali-Deininger, op cit).

Water Resources and Irrigation

10. Tajikistan has ample natural water resources, with 50.9 billion m³ of water formed annually, and an estimated 845 billion m³ stored in the form of glaciers. These waters drain into the Aral Sea basin where they represent 55 percent of the total intake. Tajikistan is entitled to 11 percent of the combined annual river flow of the Amu-Darya and Syr-Darya, which amounts to 12.7 km³. The characteristics of the river basins within Tajikistan are shown in Table 3.

11. There is a heavy reliance on irrigation to maximize output from the limited available arable land and so improve food insecurity. Irrigation is delivered through an extensive network that consists of 6,000 km of main canals, 26,000 km of on-farm canals and 11,500 km of drainage channels. Approximately half of the irrigated land depends on pumping systems (MIRWR), with lifts ranging from 10 m to 200 m, but an estimated 65 percent of pumping systems are out of operation (UNECE).

Table 3: Characteristics of River Basins in Tajikistan

⁷ Lire Ersado and Dina Umali-Deininger. “The Global Economic Crisis: Implications for Rural Poverty in Europe and Central Asia.” 2010 (forthcoming).

Name of River Basin	Catchment Area	Number of Rivers and Tributaries	Length of Rivers and Tributaries	Average Annual water discharge
	<i>1000* Km²</i>	<i>Number</i>	<i>Km</i>	<i>billion m³/year</i>
Syr-Darya	13.4	987	4,069	15.9
Zarafshan	11.8	1,781	5,770	5.1
Sukhan Darya	1.6	408	1,098	1.1
Kafernigan	11.6	2,628	5,947	5.1
Vakhsh	31.2	4,815	12,308	19.6
Pyanj	65.0	123	34,867	31.8
Lakes (no discharge)	8.5	2,289	5,150	
Total	143.1	10,742	69,189	

Source: http://www.unece.org/env/epr/epr_studies/tajikistan.pdf and Asian Development Bank

12. The irrigation network is poorly maintained, due to inadequate finance and weak management. Of the 720,000 ha of irrigated land (85 percent of all arable land) only 515,000 ha is currently in use. About half of the abstracted water is lost due to evaporation and the poor quality of infrastructure (predominantly earth irrigation channels).

Table 4: National Irrigation and Drainage Infrastructure

	Unit	Amount
Total irrigated area	Ha	718,410
Total area with pumped irrigation	Ha	383,105
Total area irrigated from wells	Ha	40,000
Length of main and inter-farm canals including:	Km	6,060
unlined/earth canals	Km	3,650
lined canals	Km	2,410
Length of on-farm canals, including	Km	26,000
unlined/earth canals	Km	20,729
lined canals	Km	5,271
Efficiency of inter-farm canals		80%
Efficiency of on-farm canals (incl. tail escapes)		70%
In-field efficiency		50%
Overall irrigation efficiency		28%
Length of drainage facilities	Km	11,550
Area serviced by drainage network, including:	Ha	310,000
Serviced by sub-surface drains	Ha	80,000
Off-farm pumping stations	Number	450
Electricity consumption of PS	GWh/year	1,510
On-farm pumping stations	No	1,807
Total number of wells (irrigation and drainage)	No	1,816
Electricity consumption of wells	MWh/year	72
Irrigation tunnels	Km	26.6
Length of telephone lines	Km	58
Length of irrigation service roads	Km	1,927

GWh Giga Watt hour (10⁹); MWh Million Kilo Watt hours (10⁶)

Source: Asian Development Bank and Ministry of Irrigation and Water Resources of Tajikistan (MIRWR)

13. The institutional framework for water resource management has changed little since independence, despite reform of the water code and the introduction of Water User Associations. Responsibility for water resource management is still delineated according to administrative boundaries, and shared by the Ministry of Irrigation and Water Resources of Tajikistan (MIRWR) and local and regional government. At the local and regional level decisions on water resource use are made by local government rather than the Raivodkhoz – the local offices of the MIRWR. This local government control of the Raivodkhoz limits the MIRWR’s capacity to manage water resources within a broader river basin framework, which results in less efficient water use and the misallocation of water resources.

14. Farm privatization has added to the problems of water resource management. The current irrigation systems were designed and constructed before independence to provide water and drainage to large, collective farms. Many of these systems cover several villages. Following farm privatization and the consequent break-up of these collective farms, little has been done to establish new physical and institutional infrastructure suited to small-scale private farms. Many new farms lack their own water gates and water meters and so are unable to regulate the timing and volume of water they use. Their water is distributed through the water gates of the original collective farm, and they pay a flat fee for its usage rather than a volume based water use fee. As a result, there is little capacity or incentive for farmers to rationalize water use and/or to lower the unit costs of irrigation.

15. Farm privatization has also resulted in a lack of clarity as to who is responsible for the maintenance of secondary canals. These canals were originally maintained by the collective farms, but an effective institutional basis for transferring this responsibility to new private farms has yet to be established. Maintenance is often neglected as a consequence. Water User Groups assume this responsibility where they exist, but WUAs are not yet widely represented in Tajikistan. Hence, while farm privatization has improved the incentives for farmers to rationalize water use and maintain their on and off-farm irrigation and drainage systems, the physical and institutional infrastructure needed for them to do this is often lacking.

16. Water resource management is also heavily constrained by a lack of financial resources. Investment and operational needs still far exceed available resources, and irrigation and drainage systems in many areas continue to deteriorate. Expenditure on operations and maintenance (O&M) fell from \$88/ha in 1990 to \$14.30/ha in 2003; versus requirements of \$21-28/ha for gravity fed systems and \$60-\$150/ha for pump-fed systems (ADB, 2004). Farmer access to irrigation water is declining as a result of this inadequate maintenance, and the salinization of scarce arable land continues to increase, especially in Sughd and Khatlon oblasts. The World Food Program estimates that almost 40,000 ha of arable land are severely or moderately salinized and more than 40,000 ha are waterlogged. The Ministry of Irrigation and Water Resources estimates that salinization depresses cotton production by 100,000 tons a year.

17. As a result of these deficiencies most farmers have limited capacity or incentive to use water more efficiently, or to produce higher value crops in order to maximize the returns to irrigation. Those without water meters are unable to control the timing and volume of water delivery. These farmers pay a flat fee of 6 somoni/1000 m³, irrespective of whether water is delivered by gravity or pump irrigation. In addition, water use fees are the same throughout the

country and are well below the real costs of delivery. This approach also severely limits the financial resources available to the MIRWR for maintenance.

18. Water User Associations (WUAs) are being established to address some of these issues, notably the need for water users to assume more responsibility for financing and managing water delivery through the secondary and tertiary canals. They still lack the capacity to respond to this challenge however, and are viewed by local government as little more than an alternative means to collect water use fees. Their impact will remain limited until they become stronger and more numerous, and are able to work with local government and the local Raivodkhoz as partners rather than tax collectors.

19. Government is highly aware of these constraints and recognizes the need for comprehensive reform of water resource management. It established a working group of national and international experts in 2009 to develop recommendations for the future and the group has now prepared a Water Sector Development Program for 2010-2025. Their main recommendations are summarized below:

- Base future water resource management on river basin principles;
- Strengthen the capacity of WUAs;
- Diversify the management process through decentralization;
- Update the database, engineering schemes and maps of irrigation and drainage systems;
- Repair and install new water metering facilities;
- Repair canals to prevent leakages;
- Create water reservoirs for multi-purpose use;
- Increase farmer participation in O&M and infrastructure development;
- Record water usage systematically, implement flexible water use tariffs and quotas;
- Shift to less water stressed crops (cereals, oil crops, legumes), and plant trees in water scarce areas (almond, walnut, pistachio, wild cherry, poplar tree, etc.);
- Apply new technologies (trickle irrigation, sub-film cropping, mulching, appropriate fertilizer application); and increase the role of farm extension services.

20. Significant institutional reform will be required to implement these changes as the existing administrative structures will need to be transformed into river basin management authorities, which work closely with WUAs.

21. In parallel with these reforms, government also plans to improve water supply to 39,800 ha of irrigated land and to rehabilitate the irrigation network for a further 449,600 ha of land, including pumping stations and pipelines.

Rural Poverty in Khatlon

22. Khatlon Region (Oblast) remains the main location of rural poverty in Tajikistan mostly due to the dependence of its rural population on the historically depressed cotton sector. Forty-seven percent of the regions people live below the poverty line (less than US\$ 1.37/day), and forty percent live in extreme poverty (less than US\$ 0.87/day)⁸. Approximately 15 percent of rural households in Khatlon are female headed (TLSS, 2007). The World Food Program (WFP) Food Security Bulletin of September 2009⁹ reports that in July 2009, 32 percent of the entire rural population was food insecure, with 9 percent of rural households experiencing severe food insecurity. WFP has now classified food insecure households in Khatlon and Sughd Regions as the most vulnerable to shocks, and Khatlon and Sughd as priority zones for intervention. The project estimates that the remittance income of rural households in Khatlon fell by approximately US\$ 200 million in 2009, a shock of major proportions.

23. Khatlon's rural poverty and food insecurity can be reduced. The region has a good agricultural resource base with a large area of arable land, favorable climate, and access to gravity-fed irrigation. But while access to water is adequate, the irrigation systems are generally in poor condition due to lack of funding for maintenance and rehabilitation -- which lowers crop yields. Farmer ability to use available water efficiently is also constrained by the slow adjustment of irrigation management in the aftermath of farm privatization. The current irrigation and drainage systems were designed for large, collective farms and usually covered several villages. Hence, newly privatized farms often lack their own equipment for controlling and metering water use, and must rely on water distributed through the water gates of the original collective farms. Farmers without their own water gates and water meters are obliged to pay a flat fee for irrigation, and so lack the incentive to use water more efficiently.

⁸ The Tajikistan Living Standards Survey (TLSS) estimated poverty at 81 percent in 1999; 64 percent in 2003; 57 percent in 2004 and 53 percent in 2007 (the 2007 estimate is not comparable with the estimates in other years due to changes in methodology).

⁹ <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp208031.pdf>

Annex 2: Results Framework and Monitoring

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

PDO	Project Outcome Indicators	Use of Project Outcome Information
The project objective is to generate temporal employment and rehabilitate irrigation and drainage infrastructure in selected districts in Khatlon Oblast as a means to increase household food security.	<p>Amount of cash transferred to project beneficiaries</p> <p>Number of beneficiaries employed</p> <p>Average income per beneficiary</p>	Gauge progress towards achieving PDO
Intermediate Outcomes	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Component 1: Public Works to Renovate Irrigation and Drainage Infrastructure		
Rehabilitation of selected irrigation and drainage (I&D) canals as a result of public works	<ul style="list-style-type: none"> • Improved drainage of on-farm canals (Km of drainage, on-farm canals) • Improved drainage of off-farm canals (Km of drainage, off-farm canals) • Renovated on-farm canals (Km of renovation, on-farm canals) • Renovated off-farm canals (Km of renovation, off-farm canals) 	Monitor progress and impact of public works program
Public Works Program	<ul style="list-style-type: none"> • Number of sub-programs established • Number of sub-programs completed 	Monitor progress and impact of public works program
Component 2: Technical Assistance		
Prepare proposals for the introduction of a Water Basin Management (WBM) scheme, including recommendations on the roles, responsibilities and institutions required for WBM and the basis for a gradual shift from the current system to WBM.	A Water Basin Management Scheme submitted to the Government	To implement a gradual shift from the current system to WBM
Prepare recommendations on how government can design and implement its public works programs as a means to provide temporary employment to alleviate food insecurity	A set of recommendations on for government on how to design and implement its own public works programs	To strengthen government capacity
Component 3: Implementation Support, Monitoring, and Evaluation		
Effective project management	Timely and complete project status reports, satisfactory audits, and satisfactory supervision ratings	Assess efficacy of project management

Arrangements for results monitoring

		Data Collection and Reporting			
Project Outcome Indicators	Baseline	FY1	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Number of households with improved income	0	25,000	Semi-annual	Project monitoring, impact surveys, participatory M&E	PMU; M&E; External Evaluations
Jobs created by the project (number of working days)	0	459,000	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Jobs created by the project (number of workers employed, only for manual cleaning)	0	6,950	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Amount of cash transferred (\$ per person, number people employed)	0	4,854,000	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Preparation of proposals for the introduction of a Water Basin Management (WBM) scheme	WBM scheme not available			Reports provided by PMU and supervision missions; Information from Water Users Associations	PMU; M&E; External Evaluations
Preparation of proposals for the implementation of public works programs by government	not available			Reports provided by PMU and supervision missions;	PMU; M&E; External Evaluations
Intermediate Outcome Indicators					
Improved collector and drainage canals (Km of drainage)	0	576	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Renovated irrigation canals (Km of canals)	0	1,825	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Fortified spillways (Number)	0	2,630	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Construction of outlet gates (Number)	0	503	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Repair of canalette network (Km)	0	1.1	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Improved covered collector and drainage canals (Km)	0	0.7	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Pump station repair (Number)	0	14	Semi-annual	Public Works Component Monitoring Reports	PMU; M&E; External Evaluations
Efficient and effective project management	n/a	Satisfactory supervision ratings	Semi-annual	IDA Supervisions, Audits, Mid-Term Evaluation, ICR	PMU, IDA

Annex 3: Detailed Description of Project Components

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

Component 1: Public Works to Renovate On-Farm Irrigation Canals and Off-Farm Drainage Infrastructure (EUR6,605,500).

Background and overall concept

0. Five *raions* (districts), all situated in Khatlon *oblast*, have been selected by the project: Farkhor, Kubodiyan, Kumsangur, Shartus and Vakhsh. They were selected using three criteria: the level of food insecurity (at least 10,000 food insecure households), the level of irrigation (at least 10,000 hectares of irrigated land), and the extent to which farms have been restructured (at least 60% of land under private ownership).
1. The irrigation schemes in these five *rayons* receive their water from three rivers: Vakhsh, the Panj, and the Kofarnigon. Characteristic of Tajikistan, these rivers are fed mainly by snow melt from glaciers and spring rains, which results in large fluctuations in flow volumes (100 percent) during the course of a year. Due to the geology, the rivers carry heavy loads of wash and bedloads, including eroded rock material and fertile soil when in flood.
2. The construction of flow control structures on such rivers, to regulate the intake of irrigation water, is difficult and costly. In locations without permanent weirs across the river, flow control depends on intensive maintenance to remain functional. Due to the cost and difficulty of maintenance, many intakes are prone to flood damage and siltation, resulting in low flow capacity of the conveyance canals and a shortage of irrigation water towards the end of the irrigation season. In the past, intake maintenance was carried out by heavy bulldozers, but these are now either out of use or very old. As a result, adequate maintenance is no longer assured. Moreover, due to the non-availability of dredgers and excavators and/or aging machinery (i) the secondary irrigation canals (“off-farm” canals) are filled with sediment, and (ii) the drain collectors are no longer regularly excavated -- which results in wide spread water logging and even soil salinization in several schemes.
3. The I&D systems supplied by one river intake are of different sizes (from 20,000 up to 100,000 ha), and are mainly composed of earthen canals (about 80 percent) and flumes (canalettes, 20 percent), except where secondary canals serve as feeders for pump stations. These earth canals convey water by gravity from river intakes via large (primary) canals with flow capacities up to 100 m³/s, to individual irrigation schemes at *Jamoat* level. From here, at secondary level, the irrigation water is distributed via farm outlets to farmers’ fields (tertiary system). Wherever hydraulic structures (including flumes) are needed for water distribution, the lack of maintenance has gradually led to their deterioration or destruction. Drainage is provided by means of large drain collectors fed by smaller drains, and in some cases by sub-surface drains. Most of the drains are silted and groundwater tables are high. This leads not only to water logging and soil salinization, but also in some villages to the damage of houses due to capillary rise of groundwater.

4. The rehabilitation of these irrigation and drainage (I&D) systems will be implemented through a public works program, supplemented by procurement of locally available low cost tools such as shovels, wheelbarrows, spikes etc, and limited rental and/or import of auxiliary equipment (excavators, bulldozers etc.). Total employment generated by the public works program is estimated at a half million person-work-days, benefitting up to 6,500 persons.
5. Contracting for the employment program will be based on the existing “work-day accounting” system. Work-day accounting books will be distributed to each project community, to be completed in three copies: one for public display in the community, a copy to the Project Management Unit in support of payment requests, and a copy to the State Savings Bank as the basis for payment. In line with existing procedures for channeling social payments to the rural poor, payments will be processed by the State Savings Bank on a bi-monthly or monthly basis.
6. There are 31 registered Water User Associations (WUAs) in 32 jamoats (within 5 districts) located in the project area. Because some jamoats are being served by more than one source of irrigation water, several jamoats have more than one WUA. The coverage of irrigated area by WUAs ranges from almost 100 percent in Farkor and Vakhsh districts to less than 15 percent in Kumsangir district. Where they exist, WUA would be actively involved in all stages of project implementation starting with selection of particular subprojects (together with communities), day-to-day monitoring of the works performed (together with NGOs, PMU engineers and jamoat officials) and participation final acceptance of the works performed (jointly with raivodkhos and jamoat officials and PMU engineers). The role of the WUAs will be detailed in the POM. Furthermore in order to build capacity of WUAs in the project area, the Environmental Management Plan foresees about US\$70,000 in training budget for sustainable water and land management and agricultural practices which would be directed to WUAs (where they exist). Finally, the TA component includes additional activities, which would support WUA development both on a pilot and national levels.

Selection of Sub-Projects

7. Within the five selected districts irrigation eligible irrigation schemes will be selected from 32 jamoats based on the following criteria: at least 50 percent of farm land has been privatized, total rehabilitation costs < 250 euros/ha, at least 50 percent of the cost of rehabilitation to be allocated for manual labor, irrigation scheme is technically sound, and the public works complies with all social and environmental safeguards.
 8. The pre-condition for land privatization raises the incentives for both local government authorities to implement land privatization, and for farmers to continue maintaining their irrigation and drainage canals after the project is complete. To ensure that low income, vulnerable people are strongly represented in the work force the wage rate will be set at the prevailing district level wage for unskilled labor. Payment will also be made on a piece-work rate rather than a daily wage as international experience has shown that this approach is more favorable for women.
- 9. The Technical Screening of potential sub-projects** for repair/rehabilitation of irrigation systems (IS) or collection and drainage systems (CDS) will involve the following procedures:

- An assessment of the physical and technical characteristics of the irrigation system, according to its original design. This will include an assessment of the water supply to the system and its subsequent distribution through secondary and tertiary canals, its capacity to meet the irrigation needs of the land in question, and the capacity of the drainage system to ensure adequate run-off and minimize salinization;
- Where the original design is deemed to be sound, an assessment of the requirement for repair and rehabilitation works will be made based on a topographic survey to ascertain the current profile (cross-section) of canals and drains and the work needed to restore them to their original dimensions.
- An estimate of the material and financial resources required for this repair and rehabilitation;
- An analysis of projected crop production in the irrigation system, with and without project intervention, to assess the potential impact of the repairs/rehabilitation.

10. To be eligible for project support the sub-projects will need to be simple in design, technically sound, and the investment results should be appraisable, sustainable and cost-effective. The actions taken should not materially affect the environment and any environmental implications should be described in sub-project design. All technical aspects of the design will be prepared in accordance with the prevailing construction norms and specifications, technical instructions and recommendations of the Republic of Tajikistan.

Table 1. Procedures for Information Collection, Analysis and Sub-project Selection and Design

Main actions, required information and analysis	Comments
<i>First stage. Develop and assess preliminary project proposals (By Appraisal)</i>	
Check and clarify preliminary data collected for first three jamoats. Collect raivodkhoz level data for remaining jamoats selected for potential project support for repair to IS and CDS.	Prepare preliminary estimates of unit cost rates for discussion
Prepare summary list of potential districts and jamoats for project support.	Subject to agreed selection criteria
Select and approve the list of IS and CDS proposed for project support, for each jamoat to be included in the project	Categorization of IS and CDS by sub-project. Prepare list of priority and reserve sub-projects
Complete the collection and analysis of information for selected districts and jamoats, according to the agreed formats	Final information to be prepared in accordance with agreed format
Prepare a summary appraisal report of the selected sub-projects, which includes a list of sub-projects, a map with their location, summary tables of the technical and economic indicators used in sub-project design, and the estimated costs.	For agreement with oblast officials, the Ministry of Water Resources and Government, and submission to World Bank
<i>Second stage. Review of detailed design reports (During Appraisal)</i>	
Verify the agricultural and water use data.	For adjustment if required
Further examination of selected sub-projects versus reserve sub-projects	Adjust assumptions if necessary
<i>Third stage. Prepare detailed design reports (Project Implementation)</i>	
Prepare detailed design of each sub-project (profiles, cross-sections of IS and CDS, design vs. actual, schedule of physical amount of works	

(sediment cleaning) based on measurements; working drawings for rehabilitation of main structures. Specifications of equipment.	
Adjust preliminary volume of works, prepare final schedule of works and revised estimates for sub-projects	
Sub-project feasibility to be based on the following indicators: <i>Increased water supply;</i> <i>Increased production capacity of land, and associated increase in yield potential;</i> <i>Expected economic benefits;</i> <i>Social aspects of the project impact (employment generation)</i> <i>Cost per beneficiary;</i> <i>Cost per hectare of irrigated land</i>	
<i>Prepare design report for each sub-project (explanatory note) using proposed structure (contents) of the sub-project</i>	First three sub-projects will be subject to World Bank prior review and “no-objection”.

11. **Technical plans** of the relevant structures will be required in order to plan, cost and supervise cleaning of the IS and CDS. This technical input will also be required where repair or construction of outlet structures is included in the sub-project, in order to determine the volume of earth and concrete works to be done and required metal structures.

12. In addition to the manual and mechanized cleaning to be done through the public works program, the project will also fund limited construction of water distribution structures and the repair and replacement of water gauges on irrigation canals. The basic irrigation infrastructure is absent or has collapsed in some areas; and in other areas water distribution cannot be regulated and the water volume used cannot be measured. In such areas, repair and rehabilitation of the irrigation and drainage system will not be enough to improve irrigation.

13. Where these needs are encountered, local engineers and specialists from the raivodkhozes will be asked to make recommendations on the work needed for repair and construction. This will include earth and concrete works to be implemented manually, and the purchase of concrete components and metal slabs.

14. Implementation of this component will involve the following sub-components:

(1) Sub-component 1.1: Sub-project selection and detailed design

To be eligible for project support, the sub-projects will need to be simple in design, technically and environmentally sound, cost-effective, socially acceptable and eventually sustainable. The actions taken should not materially affect the environment and any environmental implications should be described in sub-project design. All sub-projects will be screened and ranked according to the selection criteria. The design of eligible sub-projects will be carried out in accordance with prevailing construction norms and specifications, technical instructions and recommendations of the Republic of Tajikistan.

(2) Sub-component 1.2: Manual labor employment

Some data is not available, please using the available figures correct the structure of sentences

As a given priority, the public employment works would first include “manual labor” (i) to clean (1,825 km; 744,064 m³) irrigation canals (ii) to clean crossings under bridges (1,295 m³), (iii) to replace iron gates at regulation structures or provide permanent farm outlets (503.); and (iv) to fortify spillways with turf (2628).

(3) Sub-component 1.3: Mechanized works

In addition to manual work, “mechanized works” will be included where the requisite work can only be carried out by machinery. This would include: minor works on the canals intakes, cleaning of collector drains (576 km, 1,812,291 cum), ground leveling along collectors (576 km, 930,656 cum) and repair of selected pumping stations (14 no.).

(4) Sub-component 1.4: Procurement of material, tools and machinery

The project will also finance the acquisition of equipment, hand tools, construction materials, spare parts, and water flow controlling and metering devices/implements. Earth moving equipment will only be purchased in special cases where the justification for its use is strong and alternatives in the form of leasing and contracting are not available.

Component 2: Technical Assistance (EUR450,000).

Sub-Component 1: Develop a Framework for the Introduction of Water Basin Management

15. This sub-component will result in a detailed set of recommendations, based on international experience, of (i) how to design the policies and institutions necessary for water basin management in Tajikistan; and (ii) how to effect the associated transformation from the current system to the new one. The TA will consist of the following elements:

- ③ The delineation of discrete Water Basin Catchments based on a review of current water resources in Tajikistan, in order to define the boundaries of future Water Basin Authority jurisdiction. Given the long history of water resource management in Tajikistan this is unlikely to be difficult from a technical viewpoint, although it will require consensus within government where it involves the split or merger of existing, administratively defined irrigation and drainage schemes. This sub-component will draw on existing hydrological, climatic and agricultural data to establish the supply and demand for water in each Water Basin Catchment.
- ③ A review of the existing legal and institutional basis for water resource management and a set of recommendations on the legislative reforms needed to establish and operate independent Water Basin Management Authorities. This review will include an analysis of the current funding requirements for maintaining irrigation and drainage infrastructure, and recommendations as to how this should be apportioned between government, Water Basin Management Authorities and farmers – including recommendations on the future level of water use fees to be paid by farmers.
- ③ Recommendations on the desired institutional structure and staffing of the independent Water Basin Management Authorities; and associated changes to the structure, responsibilities and activities of the Ministry of Irrigation and Water Resources and

relevant regional and local government bodies. It will also include broad guidelines for apportioning the cost of water resource management between national government, Water Basin Management Authorities, and Water User Associations/farmers.

- ③ A series of workshops, seminars, focus groups, stakeholder discussions etc at national, oblast and raion level to explain the concept of water basin management and the findings of the above proposals and recommendations.
- ③ A detailed set of recommendations on how to phase and sequence the transformation of water resource management from the existing structure to the system of water basin management and propose a realistic schedule and timeframe for change. These recommendations should include the legislative and institutional changes to be made at national level, a framework for the transfer of responsibility from existing authorities to the new Water Basin Management Authority, and the approach to reform of the financial basis for operation of the Water Basin Management Authority.
- ③ Identify two of the proposed Water Basin Management Jurisdictions that could be used to initiate or pilot the introduction of Water Basin Management, one in a predominantly rural area with gravity-fed irrigation and the other with a broader mix of rural and urban water use.

Sub-Component 2: Develop Recommendations on the Design and Implementation of Public Works Programs to create Temporary Employment by Government

16. Given the high vulnerability of rural households to food insecurity in Tajikistan and the limited capacity of government to respond to this problem through existing social safety nets, the underlying approach of the project could well serve as a model for future public works programs. With this in mind this sub-component will be implemented towards the end of the project to assess the extent to which government financed interventions of this nature could be used as a social safety net in the future. This TA will also contribute to ongoing work by the EU to strengthen social safety nets.
17. The TA will involve a review of: lessons learned from the project, the nature of existing safety net programs (including public works), the capacity of relevant social services to design and implement a public works program of this nature, and the budgetary implications of such interventions. Where appropriate, recommendations will be made as to the kinds of donor support required to strengthen the government's capacity for public works programs as a means to reduce household food insecurity.
18. ***Component 3: Implementation Support, Monitoring & Evaluation (EUR364,500).*** The PMU will be the main project implementation agency, providing overall coordination and monitoring of implementation progress, and will be responsible for financial management and procurement. This component will finance all costs related to the coordination, social mobilization and management of the planned activities, including arrangements for financial management and procurement. It will also support continuous monitoring of project implementation, including overall annual project audits, as well as periodic surveys on project outcome indicators (including physical, agricultural, social and economic indicators). A

communications strategy will be mounted prior to project commencement to inform rural households and local government authorities of the objectives of the project, the support to be provided and the eligibility criteria for support, and the measures to be taken to prevent corruption.

19. In addition, this component will allocate funds to ensure appropriate EU visibility. This allocation will finance communication and public awareness activities, which will profile the EU support through press releases, TV and radio broadcasts.

Annex 4: Summary of Estimated Project Costs
REPUBLIC OF TAJIKISTAN
PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER
MANAGEMENT PROJECT

Project Costs

- The estimated project cost is EUR 7,416,750. It will be funded by the European Commission on the basis of a standard Administration Agreement with the World Bank under the Global Food Crisis Response Program. On the basis of the agreed procurement plan the project budget is as follows:

Project Activities	EUR	US\$
Component I	6,577,037	8,879,000
Sub-project selection, detailed design and supervision	369,630	499,000
Manual labor employment (social mobilization)	2,937,037	3,965,000
Mechanized cleaning and labor intensive on-farm works (contractors)	2,440,741	3,295,000
Procurement of material, tools and other equipment	829,630	1,120,000
Component II		
Technical assistance	444,444	600,000
Component III		
Project management, monitoring & evaluation, EU Visibility	395,269	533,612
Total	7,416,750	10,012,613

Breakdown of eligible costs	EUR	EUR	EUR
	2010	2011	TOTAL
1. Human Resources & Travel			
1.1 Human Resources & Travel - HQ	-	-	-
1.2 Human Resources & Travel – Country Level	-	-	-
2. Equipment & Supplies including	705,185	124,444	829,630
2.1 Seeds	-	-	-
2.2 Fertilizers	-	-	-
2.3 Food	-	-	-
2.4 Others (equipment)	705,185	124,444	829,630
3. Local Operating Costs	156,275	66,975	223,250
4. Other costs, services including:	574,203	161,853	736,055
4.1 Monitoring & evaluation	18,519	55,556	74,074
4.2 Audit	10,000	10,000	20,000
4.3 Others (TA, detailed design and engineering supervision of works)	545,684	96,297	641,981
5. Other (including Subcontractors):	4,751,768	838,547	5,590,315
5.1 Micro-finance	-	-	-

5.2 Social transfer	-	-	-
5.3 Others (public works)	5,061,708	893,243	5,954,950
6. Visibility	28,125	9,375	37,500
7. Total Recipient executed costs	6,215,556	1,201,194	7,416,750

Annex 5: Outline of Project's Anti-Corruption Strategy

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

1. The project is relatively complex, involving a large number of individuals, groups and organizations as implementers and beneficiaries. It also is to be implemented in a very short period of time, which may place pressure on the implementing institutions to take shortcuts in order to complete activities and disburse funds within the proscribed time frame. It potentially provides, therefore, many opportunities for abuse and corruption which would jeopardize the achievement of the project's development objectives. Opportunities for corruption exist at several levels and stages of project implementation. The principal areas of risk and concern are: subproject selection, contracting and procurement, subproject implementation, labor payment, and project management.
2. This annex identifies likely opportunities for corruption in these areas, summarizes how they are addressed in the project design and implementation arrangements, and outlines steps to minimize the incidence of corruption and the actions to be taken when corruption is uncovered.

Raion and Jamoat Selection

3. Since the project will not be operating country-wide, but only in specific administrative regions, care has been taken to ensure that the selection of project areas was driven exclusively by objective criteria relevant to the project objectives, rather than pressure from specific stakeholders and interest groups. Accordingly, clear and measurable selection criteria were developed and applied to guide the selection of raions and *jamoats* where the project will be implemented. The project's target raions have been determined based on three specific criteria (progress on land reform, number of food-insecure households, and share of irrigated area in total arable land) so as to eliminate the potential for undue interference in this aspect of project design by special interests and to ensure that the project interventions will have maximum impact towards achieving its PDOs. All *jamoats* in each of these five raions will be eligible to apply for project support for sub-projects within their territory.

Sub-project Selection

4. Within each of these *jamoats*, the individual subprojects – the irrigation and drainage schemes or scheme segments to be cleaned and/or rehabilitated -- are still to be identified. These sub-projects are the principal vehicle through which project resources will be made available to the beneficiary communities, in the form of improved irrigation and drainage facilities, and to the beneficiary individuals, in the form of wages for labor performed. Project success therefore depends critically on the extent to which the selection of sub-projects is determined (a) by objective criteria that are aligned with the PDOs and (b) by the extent of local ownership and commitment. To reduce the risk of manipulation in the selection of sub-projects, technical, social and economic criteria have been specified to determine sub-project eligibility and

selection, and these will be strictly applied by the PMU when screening applications. In addition, IDA approval will be required for all sub-projects.

5. Sub-project proposals will be submitted by the *jamoats*. Members of the local elites may try to impose their preferences for sub-project selection by limiting information flows, claiming superior understanding, calling on traditional patterns of deference to authority, or limiting discussion. Whether such efforts are motivated by paternalism or by desire for personal gain, the result will be a corruption of the process of participatory decision making. To prevent “elite capture” – i.e., to ensure that sub-project proposals reflect the considered priority needs of the concerned communities and not only or predominantly those of local elites or administrations -- implementation in the field will begin with an initial information, awareness and social mobilization campaign in the communities. Public meetings will be held in each village with the assistance of the *makhallahs* and local public committees at which the citizens will be informed about the project’s objectives, principles, sub-project selection criteria, implementation arrangements, likely scope of work and work schedules, work wage rates and payment arrangements. In these meetings, the citizens will be invited to participate in an open discussion of these issues. As direct beneficiaries of location-specific sub-projects and as providers of the bulk of the labor to be employed, the local residents are the primary stakeholders. They will therefore be invited not merely to participate in the public works program, but also to voice their opinions about sub-projects to be considered for implementation before the contracted design engineers develop the detailed subproject designs.

6. All information related to the project, beginning from the preparation stage, will also be posted on information boards to be installed in public places in each community.

Sub-project Design

7. During preparation of the technical designs for sub-projects there is a risk of collusion between the design engineers and local officials to overstate the volume of manual labor needed. This would create scope for adding non-existent workers (“ghost workers”) to the employment rolls and receiving payment for them. To mitigate this risk, the project will employ one engineer for each project raion to oversee, crosscheck and verify the estimates of scope of work and, later, to ascertain that works have been implemented as planned and as reported. In addition, the implementation of each sub-project will be monitored by a small local participatory monitoring commission, consisting of one representative each of the *jamoat*, the *makhalla*, a local NGO and the local Water Users Association (if it exists) plus the project’s raion engineer and an engineer from the design and supervision contractor.

Contracting and Procurement

8. Contracting and procurement provide opportunities for corruption through collusion among various parties: contractors, suppliers, the *raivodkhozes*, PMU staff and *jamoat* heads. Procurement will be guided by the project procurement procedures, as approved by IDA. Goods and services for sub-projects will be procured through contracts issued by the PMU and delivered to the *jamoats*. All tenders will be made public, bids will be evaluated publicly, and information on contract budgets will be available to all interested parties. Apparent collusion

among contractors during the bidding process will result in cancellation of the tender and re-tendering; offending contractors will be blacklisted and ineligible to bid on any further contracts under the project. The annual independent audit will carry out random audits of sub-projects.

9. Additional anti-corruption measures in procurement management will include the following:

- Individuals involved in project management, including procurement, and in tender or evaluation committees must confirm in writing that they have no conflicts of interest, e.g., close family relationships with project suppliers, contractors or consultants; ownership or financial stakes or management functions in companies or entities bidding on project contracts; etc.
- The PMU will establish mechanisms, and IDA will monitor the adherence to them, to ensure that payments to suppliers and contractors are made according to their contract terms without delay.
- The PMU will notify IDA of every complaint received from suppliers or consultants or others relating to the procurement process; record and deal with these complaints promptly and diligently.
- The PMU will maintain up-to-date procurement records and make these available to Bank staff and auditors promptly on request.

Sub-project Implementation

10. Effective sub-project implementation and full achievement of the projects objectives, especially regarding the generation of employment and income for poor households, require considerable public awareness raising and participation. Public participation in the project communities could be undermined in a number of ways, and these are addressed in the project design.

11. Poor information may limit the participation of poor and food insecure households in the local public employment program and, hence, their access to the intended project benefits. The public awareness and information campaign in the initial project phase at the *makhallah* level is intended to address this concern. Project staff, local officials and community leaders, and local NGOs will be trained and informed, to make sure that the criteria for identifying and the process of informing the eligible local residents are well understood and that these stakeholders are fully informed about their opportunity and right to participate in the works program. The village meetings and the public information posted on community information boards will also seek to ensure that everyone eligible will be aware of the possibility to obtain employment and to encourage their participation.

12. To address the risk of the better-off in the communities securing the wage benefits of the employment program for themselves or their relatives, the project uses a self-targeting mechanism that is widely and effectively used in public employment programs. Wage rates will be set at a level high enough to secure an income well above the poverty line, but also low enough to discourage members of wealthier households from seeking to participate in the public works program.

13. Civil works and public works programs, worldwide, are often plagued by the extraction of hidden bribes through corrupt officials: unjustified payments for various licenses, permits and inspections can, cumulatively, divert significant funds from the intended beneficiaries. The fees demanded may be higher than officially established, or fees may be demanded from poorly informed clients for services or documents that are not required. The project will provide a precise list, with the corresponding official fees, of permits, licenses and inspections that are required at the subproject level and provide this information to all participating *jamoats*, *makhallas*, NGOs and design engineers, along with instructions on where to report attempted abuse. All instances of attempted or actual abuse will be reported to the Governor of Khatlon Oblast, the Minister of Irrigation and Water Resources and the Deputy Prime Minister.

14. Opportunities for corruption also exist in the form of bribes demanded and paid in order to cover up for poor quality work or for cutting corners on construction specifications. Likewise, machinery might be used to carry out works (at a lower cost per volume of work) that were intended to be done by manual labor (at a higher cost); payment would subsequently be requested as if the work had been done with laborers, and the difference between actual costs and payments received would be shared by the colluding parties. The losers in this case would be the local people who are deprived of the wages they could have earned. To counter these risks, the details about design standards, works volumes, planned and approved machinery and labor use, and implementation progress will be made public in the communities on the information boards and at public meetings. In addition, the *raivodkhoz*es will be responsible for checking the quality of works carried out, and the Participatory Monitoring Committees at each sub-project will regularly check sites. The project will deploy one engineer in each project raion for technical quality supervision of all sub-projects in that raion.

Payment for Laborers

15. A very large share of total project expenditures will be for local manual labor, employed on a temporary basis. This poses a significant risk of manipulation of the list of laborers (the “ghost worker” issue), of misrepresentation of the volume of labor performed, and of malpractice in the administration of payments to the laborers.

16. Payments to laborers will be made on the basis of actual work performed (i.e., output based). The work output norms and remuneration rates will be made known at the initial community information meetings, posted on the public information boards, and made known again to all laborers at the work sites. To ensure transparency, the list of workers will also be posted on the project’s public information boards. Payments to laborers will not be made in cash, but through the State Savings Bank under the proven arrangement for providing social support payments to the poor in rural areas. The local sub-project monitoring commission (see para. 7), and particularly the *makhalla* and NGO representatives, will monitor work progress and verify the entries in the “work-day” accounting books that will be completed in three copies (one for public display in the community, one for submission to the PMU in support payment requests, and one to be sent to the State Savings Bank as the basis for making payments to laborers). The *jamoat* will not certify and submit records of works accomplished and requests for payment without the prior written attestation of the *makhalla* and NGO representatives that

the labor records are correct. No payment will be made in the event of any discrepancy among the records received by the PMU and by the State Savings Bank until that discrepancy has been credibly resolved.

Grievance Reporting and Resolution

17. The project will establish a grievance and complaints reporting system, to allow for feedback and complaints to reach senior project officials -- via postal mail, dedicated phone number, fax number, and the internet. It will allow information to be submitted anonymously, to protect individuals concerned about possible reprisals for coming forward. Information about it and how to use it will be provided to all participating *jamoats*, *makhallas*, communities and NGOs. The reporting system will provide a channel to report suspected mismanagement, corruption and other problems that may emerge during project implementation.

18. All grievances reported will be reviewed by the PMU with a view to determining the appropriate authority to deal with it. This may be the PMU itself or its project staff at the regional or raion level, an ad-hoc committee of *jamoat*, *makhalla* and NGO representatives, or in case of suspected criminal misconduct the judicial system. All grievances reported and actions taken will be recorded by the PMU, and a summary report listing all grievances and steps taken will be provided to IDA together with the quarterly project implementation progress reports.

Project Management

19. Project staff, consultants, contractors and suppliers found engaging in corrupt practices will be dismissed summarily and the cause for dismissal will be announced publicly. The PMU will thereafter apply legal remedies to recover any damage caused.

Governance and Accountability Action Plan

20. The following matrix summarizes potential problems to be addressed, key actions to be taken, the time frame within which they are to be taken, and the agency responsible for taking the action. This action plan is a “living document”, to be reviewed and updated periodically based on the experience gained during the course of project implementation.

Anticipated Problem	Actions to be taken	Time Frame for Action	Responsible Party
1. Accountability and transparency			
The project's short preparation and implementation time frame may prevent adequate attention being placed on full transparency and accountability	Ensure that project objectives and implementation procedures are thoroughly explained to all stakeholders, i.e. officials, local leaders and NGOs who will widely disseminate information regarding the project at village-level meetings	As of project effectiveness, throughout project implementation	PMU
	Train project staff, local officials and community leaders and NGOs on public awareness campaign for all stakeholders	1 st month of project effectiveness	PMU
	Install information boards in all participating villages	At start of subproject implementation	PMU, jamoat, NGO, makhalla
2. Preventive actions against malpractices			
Subprojects proposed by jamoats may not meet project criteria	Review all subprojects against technical, social, economic and environmental criteria established by project	Before subproject approval	PMU
Subprojects proposed by jamoats may not reflect community preferences	Ensure that citizen stakeholders are consulted on subproject identification and key design aspects and implementation arrangements	During subproject identification and proposal preparation	Jamoat, NGO, PMU
Lack of adequate safeguards procedures may cause violation of project principles	Clearly communicate project principles, rules and procedures to all staff, consultants and local leaders; design and distribute information to guide communities and their leaders	Throughout project implementation	PMU
	Empower and urge project staff and beneficiaries to report instances of improper use of resources	Throughout project implementation	PMU
	Implement internal as well as participatory monitoring processes to track implementation and identify problems and malpractices during implementation.	Throughout project implementation	PMU
	Establish and train community-level participatory monitoring committees	Throughout project implementation	PMU, NGOs
	Establish grievance reporting system	As of project effectiveness	PMU
	Publicize project procedures, list of workers, etc., at information boards in public areas	Throughout project implementation	PMU, jamoat, makhallah committee
3. Procurement Management			
Weak procurement management can result in mismanagement of bidding and spending of funds	Project will strictly adhere to a transparent procurement policy based on established best practices and strict compliance with Bank procedures	Upon project effectiveness, and ongoing	PMU
	Clear eligibility criteria for bidders and product quality requirements will be specified in the project procurement manual and bidding documents	Procurement manual finalized by project negotiations	PMU
	Individuals involved in project management, procurement and tender or evaluation committees must confirm that they have no conflicts of interest	Throughout project implementation	PMU

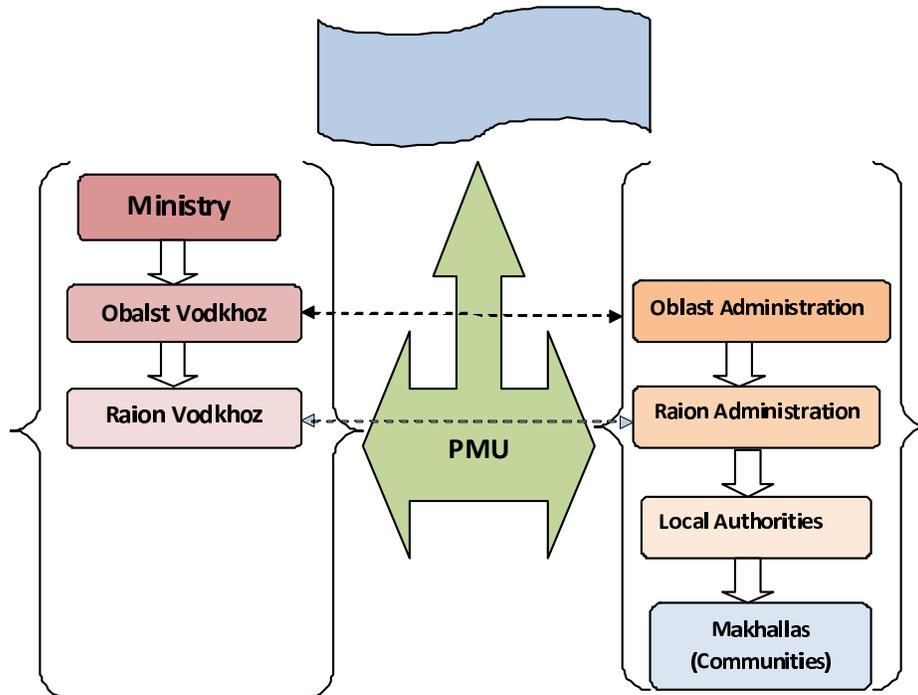
	PMU establishes mechanisms to ensure all payments to suppliers and contractors are made according to their contract terms without delays	Throughout project implementation	
	PMU notifies IDA of every complaint received relating to procurement matters; records and deals with these complaints promptly and diligently	Throughout project implementation	
	PMU maintains up-to-date procurement records and makes these available to IDA and auditors	Throughout project implementation	
4. Financial Management			
Lack of transparency and accountability in financial transactions may give rise to financial mismanagement	Financial management manual to be in place to ensure that funds are used efficiently, for the intended purposes and as per approved work plans and budgets	Upon project negotiations	PMU
	Regular financial audits to be conducted	Annually	PMU, auditors
	Sign a General Agreement with the State Saving Bank	1 month following effectiveness	PMU
	IDA supervision missions to review financial and procurement management	Twice yearly	PMU, IDA
	Fiduciary review, including physical inspection, to be conducted at least once during the life of the project	During 2 nd year of implementation	PMU, IDA
	Feedback received from participatory subproject monitoring committees should be incorporated in the project progress reports at quarterly intervals	Quarterly, starting 6 months after effectiveness	PMU
5. Project Management Systems and Processes			
Unclear implementation arrangements may adversely affect implementation and outcomes	Train project staff on project processes	Throughout project implementation	PMU
	Strengthen multi-stakeholder coordination arrangements including governmental departments, local administrations, financial institutions at state and local levels	Throughout project implementation	PMU

Annex 6: Project Implementation Arrangements

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

1. Overall management responsibility for the project will rest with the Ministry of Irrigation and Water Resources (MIRWR) and the administration of Khatlon Oblast.

Figure 1. Implementation Structure



2. With the exceptions noted below, the Ferghana Water Resource Management Project Management Unit (PMU) will be the leading operational institution for implementation of the proposed project and will carry out all project implementation in accordance with a specific Project Operational Manual (POM). The PMU will retain overall responsibility for project procurement and will have full responsibility for project disbursement and financial management. It will also provide regular reporting and oversee communication and M&E arrangements for the project. An additional Public Works Division will be established within the PMU, which will be adequately staffed for carrying out the objectives of the Project. The Public Works Division will receive support services from other PMU personnel, including the information technology service, procurement, finance officers and others.

3. The local branches of the MIRWR, District Water Authorities (raivodkhoz) will make a preliminary assessment of the need for rehabilitation of the irrigation and drainage systems, including preparation of simple drawings for tertiary and secondary canals. Decisions regarding intervention, works to be carried out and financing will be taken after discussion with the communities (makhallahs) and local authorities (jamoats).

4. As an additional structure for implementation support an informal project coordination group will be set up and will include the representatives from the PMU, regional administration, MIRWR, World Bank and EU staff to oversee project implementation progress and discuss any pending issues on monthly basis. This approach has proven to be highly effective in implementation of the emergency operations in Tajikistan. In order to achieve time efficiencies in resolving any pending matters, it is expected that such meetings would be chaired by a designated official of the government who would have (at least) a deputy minister level position.

5. The following arrangements will cover specific aspects of project implementation:

6. ***Selection of Participating Districts in Khatlon:*** Priority areas for project support in the Khatlon region were selected according to the following criteria: (i) share of arable land under restructured farms (at least 60 percent); (ii) number of food insecure households (at least 10,000 people); and (iii) total irrigated area (at least 10,000 hectares).

7. Five districts were identified according to these criteria: Kubodiyon, Shahrituz, Kumsangir, Vakhsh, and Farkhor (Table 1). Although the percentage of dekhan farms is less than 60 percent in Farkhor, a written request from this district has been received stating that the relevant local agencies will make a considerable effort to facilitate farm restructuring during 2010 so as to be included in the project. Shahrituz has less than 10,000 hectares under irrigation (9,371 hectares) but due to considerable progress in farm land restructuring (second best performer in Khatlon) and the large number of food insecure households, this district has also been selected for participation in the project.

Table 1: Selected Districts

	Number Food Insecure People	Total Area (ha)	of which Irrigated	% of Irrigated Area	% Dekhan Farms
Kubodiyon	34,296	17,863	17,855	100.0	63.6
Shahrituz	21,000	9,432	9,371	99.4	93.9
Kumsangir	22,008	18,922	18,381	97.1	69.9
Vakhsh	44,187	24,027	20,952	87.2	98.8
Farkhor	10,152	28,719	22,214	77.3	42.4

8. ***Jamoat Selection Criteria.*** Access to financial support from the project will in principle be open to the *jamoats* of these districts, based on the following selection criteria:

1. Percentage of area of arable land under private use (“private” includes household plots, presidential land plots, family-based and individual dekhan farms in each sub-project area). This should be not less than 50 percent of the total sub-project area;
2. Investment limits. Sub-project proposals shall not exceed EUR 250 per hectare of irrigated (improved) land;
3. Sub-projects will promote labor-based technologies, with at least 50 percent of the sub-project funds to be used for the payment of unskilled labor;
4. Sub-projects shall comply with World Bank safeguard policies and procedures.

9. The PMU will support Public Works (PW) on the basis of information provided in PW sub-project proposals submitted by *Jamoats* through the District Administration (*Khukumats*). The PW sub-project proposal contains: (a) a sub-project description and technical plans that show that the sub-project is technically feasible and cost-effective; (b) a full financing plan that does not exceed a pre-determined grant ceiling for participating *Jamoats*; (c) a preliminary implementation plan (Annex 3).

10. The PMU will evaluate sub-project proposals on the basis of these criteria and screen them for compatibility with Bank safeguard requirements. It is expected that World Bank approval of the selected sub-projects will be required for the first round of sub-projects.

Sub-project Implementation

11. This component will finance the renovation and cleaning of on-farm and off-farm irrigation and drainage infrastructure through short-term public employment programs together with judicious rent/import of auxiliary equipment (excavators, bulldozers). Canal renovation work will be carried out on the existing alignment so that there will be no land acquisition. The sub-projects are expected to be simple in design but a small contingency will be available for the PMU to hire local technical expertise to assist in the preparation of sub-projects and/or to provide technical supervision of sub-projects if needed.

12. To facilitate the public works the project will procure and distribute low cost, locally available tools such as shovels, wheelbarrows, spikes etc. Contracting will be based on the existing system of “work-day” accounting and labor payments will be output-based. Payment will be set on the basis of a representative daily wage at national level using prevailing market wage rates for unskilled labor for the type of public works to be supported under the project, and work output norms will be specified and made known to all participants at the work site. The project will finance and distribute “work-day” accounting books to each community in the project areas, to be completed in three copies (one for public display at the community, one to for submission to the PMU in support of the payment request, and one to send to the State Savings Bank as the basis for payment). In line with the established practice of channeling social payments to the poor in the rural areas, payments will be processed by the State Savings Bank and made on a bi-weekly or monthly basis. The list of workers receiving payment will be displayed in public places for transparency reasons.

13. Selected districts and *Jamoats* will be eligible for support upon signing a Framework Agreement (FA) that establishes the legality for the implementation of project-funded assistance. Based on the Framework Agreement, the *Jamoat* will delegate responsibility to the PMU to (a) develop detailed engineering designs and bidding documents for implementation of the sub-project, if needed; (b) carry out procurement, evaluate and select contractor proposals for the execution of works (if needed) and supply goods for the sub-project in accordance with project procurement guidelines; (c) supervise and coordinate overall work execution for sub-project implementation, including control of technical quality and compliance with agreed implementation schedules; (d) make necessary arrangements for obtaining permits and final approvals, acceptance of completed works; (e) make payments to contractors in accordance with the disbursement arrangements noted in the Project Operational Manual. The *Jamoat* will sign all

certificates of accomplished works and will designate staff to be responsible for day-to-day, on-site oversight of the execution of works. The Project Operational Manual contains a detailed description of the roles and functions of each project stakeholder under each sub-component of the Public Works program.

14. The Jamoats, with the assistance of NGOs, will also be responsible for organization of community awareness activities and for social mobilization. Public meetings will be held in each participating village with the assistance of *Makhallahs* and local public committees. All information related to the project will be posted on information boards to be installed in public places. The project will emphasize community participation, whereby communities will be given information on the project's objectives, principles, selection criteria and implementation arrangements.

15. The provision of earthmoving equipment will be accompanied by a comprehensive training provided by the equipment manufacturer of the operator and owner, who will be involved in receiving and signing off the receipts of the equipment. In addition, a manual will be developed that will clearly define the rules of use and to ensure that proper maintenance and operation of the equipment is performed in a timely fashion. The document will include provisions for proper storage of accompanying spare parts, fluids and consumables as well as of their appropriate disposal once worn out. The manual will include calculations of operating costs, maintenance costs and amortization to ensure the continued functioning of the equipment beyond the conclusion of the project. Calculations will include applications of economic use of the equipment including a minimum number of operating hours and the corresponding costs of operation including the operator. The manual will include sample contracts that will be signed between the operators/ owner and WUAs or jamoats that will benefit from the services of the machine. The contract will including the fee level per hour of operation, costs of transport to the work site, as well as provisions to define the rules by which payments for unforeseen repairs ought to be regulated and what share of repair costs will be borne by the various stake holders of the machine. It is expected that such contracts will help with the ensuring transparency of payments and receipts. The accounts of earnings by expenditures on the equipment will be held in folders available to the public. Use of the equipment without proper contracts, agreements on payment, or failure to collect of fees will lead to the seizure of the equipment by the Oblast authorities, until such time that all fees for services have been effectively collected by the operator. While with Oblast authorities the equipment will be under seal in storage against a fee. If the equipment remains with the Oblast authorities for more than 3 months, the authorities will be authorized to auction of the equipment at going market rates. If no buyer can be found, the equipment will be returned to the Ministry of Irrigation and Water Resources who will determine its use.

Implementation of Technical Assistance

Sub-Component 1: Develop a Framework for the Introduction of Water Basin Management

16. The current institutional framework for water resource management has changed little since independence, despite reform of the water code and the introduction of Water User Associations, and its effectiveness remains weak. Responsibility for water resource management is still delineated according to administrative boundaries, and shared by the Ministry of Irrigation

and Water Resources (MIRWR) and local and regional government; the financial resources available for maintaining the current infrastructure is inadequate relative to requirements; and the condition of irrigation and drainage infrastructure continues to deteriorate. Farmer access to irrigation water is declining as a result, and the salinization of scarce arable land continues to increase. Farm privatization has added to the problems of water resource management. With the break-up of the former collective farms, it is no longer clear who is responsible for the maintenance of secondary canals.

17. Government recognizes the need for reform of water resource management and has established a working group of national and international experts to develop recommendations for the future. Drawing on international experience this group has recommended that Water Basin Management should be the underlying basis for reform, an approach supported by the donor community. Water Basin Management is a very different approach to water resource management, however, and will require deep-seated changes to policies and institutions. To support these changes the proposed TA will result in a detailed set of recommendations, based on international experience, of (i) how to design the policies and institutions necessary for water basin management in Tajikistan; and (ii) how to effect the associated transformation from the current system to the new one.

18. The TA will consist of the following elements:

- ③ The delineation of discrete Water Basin Catchments based on a review of current water resources in Tajikistan, in order to define the boundaries of future Water Basin Authority jurisdiction. Given the long history of water resource management in Tajikistan this is unlikely to be difficult from a technical viewpoint, although it will require consensus within government where it involves the split or merger of existing, administratively defined irrigation and drainage schemes. This sub-component will draw on existing hydrological, climatic and agricultural data to establish the supply and demand for water in each Water Basin Catchment.
- ③ A review of the existing legal and institutional basis for water resource management and a set of recommendations on the legislative reforms needed to establish and operate independent Water Basin Management Authorities. This review will include an analysis of the current funding requirements for maintaining irrigation and drainage infrastructure, and recommendations as to how this should be apportioned between government, Water Basin Management Authorities and farmers – including recommendations on the future level of water use fees to be paid by farmers.
- ③ Recommendations on the desired institutional structure and staffing of the independent Water Basin Management Authorities; and associated changes to the structure, responsibilities and activities of the Ministry of Irrigation and Water Resources and relevant regional and local government bodies. It will also include broad guidelines for apportioning the cost of water resource management between national government, Water Basin Management Authorities, and Water User Associations/farmers.

- ③ A series of workshops, seminars, focus groups, stakeholder discussions etc at national, oblast and raion level to explain the concept of water basin management and the findings of the above proposals and recommendations.
- ③ A detailed set of recommendations on how to phase and sequence the transformation of water resource management from the existing structure to the system of water basin management and propose a realistic schedule and timeframe for change. These recommendations should include the legislative and institutional changes to be made at national level, a framework for the transfer of responsibility from existing authorities to the new Water Basin Management Authority, and the approach to reform of the financial basis for operation of the Water Basin Management Authority.
- ③ Identify two of the proposed Water Basin Management Jurisdictions that could be used to initiate or pilot the introduction of Water Basin Management, one in a predominantly rural area with gravity-fed irrigation and the other with a broader mix of rural and urban water use.

Sub-Component 2: Develop Recommendations on the Design and Implementation of Public Works Programs to create Temporary Employment by Government

17. Given the high vulnerability of rural households to food insecurity in Tajikistan and the limited capacity of government to respond to this problem through existing social safety nets, the underlying approach of the project could well serve as a model for future public works programs. With this in mind this sub-component will be implemented towards the end of the project to assess the extent to which government financed interventions of this nature could be used as a social safety net in the future. This TA will also contribute to ongoing work by the EU to strengthen social safety nets.

20. The TA will involve a review of: lessons learned from the project, the nature of existing safety net programs (including public works), the capacity of relevant social services to design and implement a public works program of this nature, and the budgetary implications of such interventions. Where appropriate, recommendations will be made as to the kinds of donor support required to strengthen the government's capacity for public works programs as a means to reduce household food insecurity.

Annex 7: Financial Management and Disbursement Arrangements

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

A. Executive Summary

1. The Project Management Unit (PMU), under supervision of the Ministry of Irrigation and Water Resources (MIRWR) will be responsible for implementing the financial management (FM) function of the Public Employment for Sustainable Agriculture and Water Management Project (PESAWMP), including flow of funds, budgeting, accounting, reporting, and auditing. The PMU has had prior experience implementing the ongoing Bank-financed Fergana Valley Water resource Management Project (FVWRMP). FM arrangements of the FVWRMP were reviewed during the missions in November 2009, as part of the regular financial management supervision, and in April 2010 during preparation of the Additional financing, and have been found generally satisfactory. In particular: (i) the PMU has established a reliable accounting system; (ii) past audit reports have been submitted on time and were found to be satisfactory; (iii) internal controls system is adequate and (iv) staff capacity is strong. However, the PMU has not been submitting the quarterly financial reports regularly and on time. For example, FMRs for the 4th Quarter ended December 31, 2009 have been delayed for more than two months since the submission due date of February 15, 2010.

2. *Fiduciary Risk at the Project Level:* Based on the FM assessment, fiduciary risk at the project level is assessed as **substantial** before mitigation and **moderate** after risk-mitigation measures. A number of actions have been agreed to further strengthen the FM arrangements, including updating the FM manual, modification of the automated accounting system with the capacity to generate IFRs, and hiring of a Finance Manager and Disbursement Specialist to provide additional support for financial management and disbursement functions. These measures will need to be implemented prior to Board presentation.

3. *Fiduciary Risk at the Country Level:* Based on the country portfolio fiduciary review conducted in 2008, the overall fiduciary risk in Tajikistan is assessed as **substantial**. The key reasons are: (a) inadequate capacity of core control and supervisory agencies performing audits within the public sector; and (b) several critical Public Financial Management elements, including internal controls, internal and external audit, and financial reporting, are still weak. These risks will be mitigated by delegating project implementation to the PMU within the MIRWR to be responsible for fiduciary aspects of the project.

4. **Conclusion:** From a financial management perspective the fiduciary risk at project level is considered to be Substantial and will be Moderate after mitigation measures. The PMU has established satisfactory fiduciary arrangements for implementation of donor-funded projects. Additional risk mitigating and capacity building measures will be implemented to reflect the proposed project financial management arrangements, including updating the 1C accounting program to enable it to track activities under the project, revision of the existing FM Manual and hiring of two financial management staff.

The Table below summarizes the risk ratings for this project.

	FM Risk	Mitigation Measures	Residual Risk
INHERENT RISKS			
Country level: Weak PFM systems Corruption is recognized as a major problem in the country	H	Use of PMU to implement the project, with strong FM arrangements	S
Entity level: The PMU under the MRWR has adequate experience with implementation of Bank-funded projects.	M	PMU Staff capacity to be strengthened to cope with additional workload	M
Project level: Project is small sized, but will involve activities to be implemented at community level with added fiduciary risk	S	Additional measures to be implemented, including fiduciary review	M
OVERALL INHERENT RISK	S		M
CONTROL RISKS			
Staffing: FM Staff of the PMU not likely to cope with additional work load created by the new project	M	Additional FM staff to be hired to augment the PMU staff capacity	L
Budgeting: Adequate budgeting procedures are in place	M	No additional measures	M
Funds flow: Flow of funds to communities may pose additional fiduciary challenges	S	Funds flow mechanism and additional control measures will be included in the POM,	M
Accounting policies and procedures: Accounting standards used in the ongoing project are adequate and will be followed	M	POM to be revised to include activities under the new project	M
Accounting system: PMU has installed automated accounting system for FVWRMP	M	The accounting system to be modified and upgraded to support the new project	M
Financial reporting: Financial reports under the FVWRMP have been submitted with delays	S	Regular submission of reports to be monitored to ensure timely submission of IFRs	M
Internal controls: Internal control procedures described in the POM are adequate for ongoing project, but community level activities may pose additional internal control issues	S	Additional control measures to be described in a revised POM ¹⁰	M
Auditing: Satisfactory audit reports have been received under ongoing FVWRMP	M	Project to be subject to similar audit arrangements under FVWRMP	M
OVERALL CONTROL RISK	S		M
OVERALL PROJECT FM RISK	S	Risk based FM supervision, including fiduciary review	M

B. Country Issues

¹⁰ Funds flow mechanism and additional control measures will be described in the POM, Information about beneficiaries and worker remuneration will be posted on information boards in Jamoats. In addition, there will be a local NGO contracted for monthly sample spot checks of workers' time sheets.

5. A Country Financial Accountability Assessment (CFAA) for Tajikistan issued in 2003 concluded that the country's fiduciary environment is extremely weak and the risk to public funds is high. The findings, supported by the Public Expenditure and Financial Accountability Assessment (PEFA) issued in 2007, point out that systems of public accountability function poorly and public sector transparency is still a problem at all levels of government.

6. External audit is practiced by a small number of audit firms. The Agency for Financial Control and Anti-Corruption carries out inspections of budget organizations as an external audit function. But this Agency's capacity is low and the Bank does not place any reliance on audits conducted by it. Audits of Bank-financed projects have been performed by audit firms pre-qualified by the Bank.

7. The fiduciary risk at the country level is assessed as substantial. To minimize fiduciary risk, there has been a need to "ring fence" financial resources in Bank-financed projects in order to provide the appropriate fiduciary safeguards. Most Bank-financed projects in Tajikistan are implemented through stand-alone project implementing agencies that install parallel accounting systems to those used in the respective line ministries. The project implementing entities use the cash basis of accounting, which is allowed under IPSAS, and in many cases sufficient for proper project accounting. A small number of projects are implemented by borrower/recipient agencies, which are required to follow World Bank's financial management procedures rather than the country's financial management systems.

8. Due to weaknesses in the country's PFM system the proposed project will not use any elements of the country FM systems. Instead the FM arrangements for the project will be similar to those established for the ongoing FVWRMP that is implemented by the PMU within the Ministry of Irrigation and Water Resources (MIRWR).

C. Implementing Entity

9. Overall management responsibility for the project will rest with the Ministry of Irrigation and Water Resources (MIRWR) and the administration of Khatlon Oblast. The Ferghana Water Resource Management Project Management Unit (PMU) under the MIRWR, established by government order № 493 (December 27, 2005), will carry out project implementation in accordance with a specific Project Operational Manual (POM). It will be responsible for procurement, disbursement and financial management, oversee communication and M&E activities, and provide regular reporting. An additional Public Works Division will be established within the PMU. In addition to its own staff it will receive support from other PMU personnel, including information technology, procurement and financial management. The local branches of the MIRWR, District Water Authorities (raivodkhozoes) will make a preliminary assessment of the demand for rehabilitation of the irrigation and drainage systems. Decisions regarding intervention, works to be carried out and financing will be taken after discussion with the local communities (makhallahs) and the local authorities (jamoats).

10. Day to day management of the PMU, including responsibility for its reporting functions and project implementation, will lie with a PMU Director. The PMU Director will be responsible for the preparation of all project monitoring and implementation reports, the preparation of annual budgets and work plans, and liaison with other donor projects in the sector.

I. Strengths

11. The Project Management Unit (PMU) has been implementing the Ferghana Valley Water Resources Management Project, and fiduciary staff of the team has gained a good understanding of Bank procedures for financial management, disbursement and procurement. However, two finance staff should be hired to enhance capacity of the financial management and disbursement functions. The new staff will require additional training on Bank procedures during implementation. There is a project accounting system that has been established for the ongoing project that will only need to be updated to support accounting and reporting requirements of the proposed project.

II. Weaknesses and Action Plan

12. Financial management arrangements for the project are adequate. However the following action plan, as agreed with the PMU, will need to be implemented to incorporate additional financial management requirements for the proposed project.

	Significant Weaknesses	Action	Responsibility	Completion Date/remarks
1	Revision of Financial Management Manual	Financial Management Manual needs to be adapted for the new project. A draft additional chapter for the relevant components should be prepared with a detailed description of fund flows to ensure that all agencies involved in project implementation operate efficiently and effectively.	PMU	By Negotiation
2	Accounting software implementation	The Terms of Reference for the installation of and training in the accounting software upgrade (a separate configuration for the new project based on the current software needs and satisfactory to IDA) should be developed, including development of a new chart of accounts.	PMU	By RVP approval
3	Recruit required FM staff	Finance Manager and disbursement specialist for the project will be recruited.	PMU	Within 10 working days of Effectiveness

The risk associated with implementing entity is *moderate*.

a) Staffing

13. Financial management of the various project components will be under the responsibility of the Finance Manager, including responsibility for accounting and disbursements. Suitably qualified staff will be procured through a competitive process, following appointment of the Finance Manager. Past supervision of the Ferghana Water Resource Management Project shows that the existing FM arrangements are adequate for the current project implementation. All necessary financial management systems and management structures are in place and the PMU

Financial Accounting Department is staffed with a Chief Accountant and a Cashier. However, the current staffing capacity is deemed insufficient to cope with additional workload envisaged under the proposed project and will be supplemented with two additional staff to be hired by effectiveness. Adequate mechanisms will also need to be put in place to ensure effective collaboration and coordination between the PMU and the local raivodkhozes who will be the main implementing agencies. The detailed description of these mechanisms will be provided in the Project Operational Manual. The risk associated with staffing is *moderate*.

b) Budgeting

14. The PMU will prepare annual budgets for the project based on the Procurement Plan and activity programs agreed with the Bank. The Finance Manager will then be responsible for formulation and management of the project budget. He/She will liaise with the Procurement Specialist and other project specialists to agree on preliminary budgets. He/She will make sure that all sub-agencies involved in project implementation submit their budgets on time and then prepare a consolidated project budget. These budgets will form the basis for allocating funds to project activities.

15. Budgets will be prepared in accordance with the IFR format (disbursement categories, components and activities, account codes, and broken down by quarter). They will then be discussed with PMU management and agreed with the Bank before submission to the Ministry of Irrigation and Water Resources (MIRWR) for final approval. Approved annual budgets will then be entered into the accounting system and used for periodic comparison with actual results as part of the interim reporting. The risk associated with budgeting is *moderate*.

c) Accounting System

16. The PMU will operate and maintain a financial management system capable of generating Interim Unaudited Financial Reports (IFR) in accordance with formats to be agreed with the IDA. It will use an automated accounting system for record keeping and reporting. This system will ensure proper tracking of resources and expenditures, and generate quarterly financial reports in formats acceptable to the Bank. All transactions will be recorded on a cash basis, with supporting documentation maintained in files for ready access by auditors and during implementation support missions of the World Bank. The chart of accounts for the project will allow tracking of project transactions and reporting by source of financing, project components, and type and category of expenditure. The Finance Manager of the PMU will be responsible for overall project financial management, maintenance of books and accounts, preparation and dissemination of financial statements and IFR, and timely audits. The PMU will maintain appropriate financial records and reports in accordance with existing government financial regulations and standards acceptable to IDA. A fixed assets register will be created to record all assets bought with project funds. The accounting system will be reconfigured to support accounting and reporting requirements of the new project. The risk associated with accounting system is *moderate*.

d) Internal Controls and Internal Audit

17. The PMU's Project Operational Manual documents the internal control mechanisms being followed in the application and use of project funds and the implementation of ongoing project. These internal control mechanisms focus on ensuring the completeness of accounting transactions, reliability of accounting data, safeguarding of project assets (including safe custody of cash and other assets), proper monitoring of contracts, proper authorization and documentation of all project expenditures, and full accountability of project funds. The internal control procedures established under the existing project will be followed, with the manual being revised to incorporate activities under the proposed project. In addition, there will be a local NGO contracted for monthly spot checks (at least 5% of total workers) of workers' time sheets.

18. The manual reflects project structures and allows for an appropriate segregation of functions, based on clearly defined job descriptions with different authority levels. It also describes the procedures for managing the flow of funds needed to support project activities, and the management of bank accounts -- including regular reconciliation of bank statements with project records. All cash withdrawals from the bank account require at least two signatures. Regular financial reporting is required to ensure close monitoring of project activities, and the flow of funds in support of project activities -- including community level (jamoats) activity.

19. The PMU will follow local regulations and WB guidelines for the execution of contracts awarded under the project. In particular, all goods delivery notes, acts of work completed and invoices should be signed by appropriate personnel of the project implementing agency before payment orders are prepared and processed. The risk associated with internal control is *substantial* before and *moderate* after mitigation measures.

e) Financial Reporting.

20. Quarterly financial reports under the ongoing FVWRMP have been submitted to the Bank with delays due, mainly, to lack of understanding of the financial reporting obligations by the PMU. For project monitoring purposes, quarterly interim unaudited financial reports (IFRs) will be required. The PMU will be responsible for preparing these IFRs, which will include: (a) project sources and uses of funds, (b) uses of funds by project activity, (c) statement of designated account/local bank account statements, (d) SOE Withdrawal Schedule, and (e) Disbursement Summary. These financial reports will be submitted to IDA within 45 days of the end of each quarter. The first quarterly IFRs will be submitted after the end of the first full quarter following the initial disbursement. Formats of the annual financial statements and the IFRs will be incorporated into the revised Project Operational Manual (POM). Appropriate accounting software with the capacity to prepare IFRs incorporating all components, sub-components and expenditure categories is in place, but will be reconfigured to accommodate the requirements of the project. The risk associated with reporting and monitoring is assessed as *substantial* before and *moderate* after mitigation measures.

f) Disbursement and Funds Flow Arrangements.

21. Grant funds will flow to the project via disbursements to the Designated Account (DA) maintained by the PMU. There will be no Government contribution of funds to the project. The project will follow transaction-based disbursement procedures, including advance to the DA,

reimbursements based on full documentation and Statement of Expenditures (SOEs), documentation of the DA based on full documentation and SOEs, direct payments and special commitments. Withdrawals from the Grant Account will be requested in accordance with the guidance provided in the Disbursement Letter. Withdrawal applications will be signed by the authorized representative of the recipient.

22. The PMU will be responsible for keeping supporting documentation for all project expenses, especially those reported through SOEs, and for making them available to IDA supervision missions as well as to the auditors. The risk associated with flow of funds is *substantial* before and *moderate* after mitigation measures.

g) Designated Account

23. To facilitate timely disbursements for eligible expenditures on works, goods and services the PMU will open and operate, under terms and conditions acceptable to the Bank, a Designated Account in Euros in a commercial bank acceptable to IDA. The PMU will be responsible for appropriate accounting of the funds deposited into this account, for reporting on the use of these funds, and for ensuring that they are included in the audits of the financial statements. The PMU will also report on the status of this account with any request for disbursement submitted to the Bank. The authorized allocation of the Designated Account will be specified in the disbursement letter. The PMU will be responsible for submitting documentation against funds utilized from the Designated Account for eligible expenditures on a monthly basis and will be supported by appropriate documentation, including detailed bank statements and reconciliation statement.

h) Sub Project Account

24. The PMU will open a Sub-project account in Somoni for processing payments to individual workers at the site. The PMU will be responsible for the monthly transfer of funds through the project bank to the accounts of individual workers employed under the project. All transfers to workers' accounts will be based on the Statement of Completed Works signed by regional specialists and approved by the PMU Director. Only funds needed for immediate payments will be transferred to this account.

i) Use of Statements of Expenditure (SOEs):

25. Disbursements may be made against SOEs as follows:

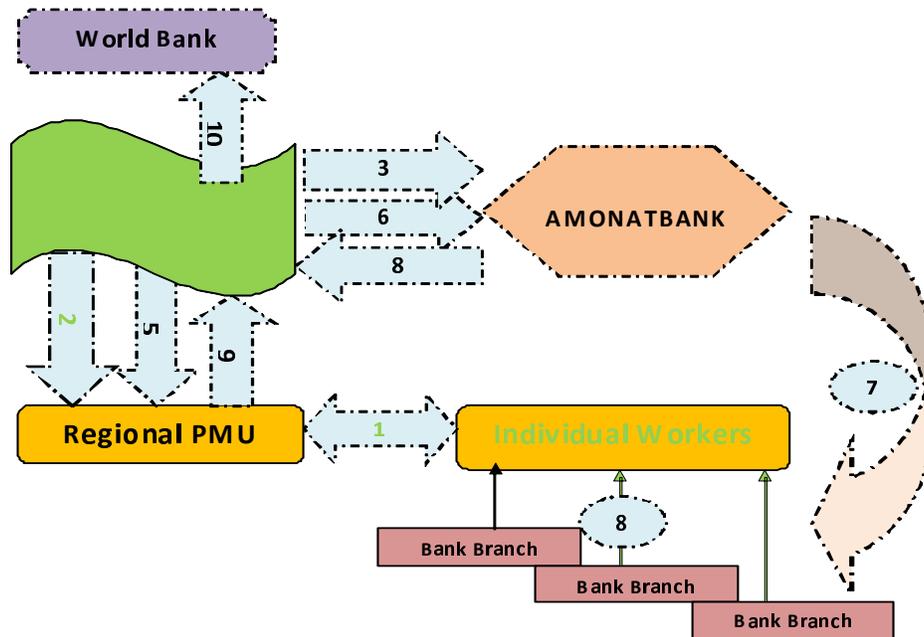
- works, goods and consultant services contracts with firms costing less than US\$ 100,000 equivalent each;
- consulting contracts with individuals, costing less than US\$ 50,000 equivalent each;
- operating costs.

26. Documentation in support of SOEs will be retained by the PMU for at least one year after the Bank has received the audit report for the fiscal year in which the last withdrawal from the Grant Account was made. The documents will be made available for review to Bank supervision

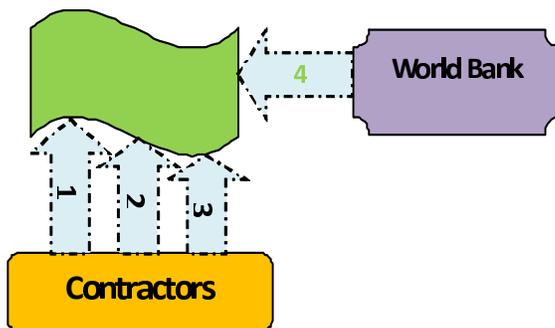
missions and for annual audits. All withdrawal applications for expenditures above the SOE thresholds specified above will be supported by full documentation (i.e. contracts, invoices, etc.).

j) Direct Payments.

27. The minimum application size for direct payments and for issuance of Special Commitments will be specified in the Disbursement letter. All withdrawal applications for direct payment or for issuance of special commitments will be supported by full documentation.



Components 1 (a,c,d); 2 and 3: Technical Assistance and Project Management



k) Financial audits.

28. There will be annual audits of the project financial statements, covering all aspects of the project. The audits will be performed by independent auditors acceptable to the Bank, and in accordance with International Standards on Auditing (ISA issued by the International Standards and Assurance Board of the International Federation of Accountants (IFAC). The auditors' TORs will be prepared by the PMU and cleared by the Bank before engaging the auditor. They will include an audit of financial transactions, an assessment of internal controls, funds flow mechanisms, and the reasonableness of the accounting, reporting and internal controls for the project. The annual audit reports will consist of a single opinion on the financial statements of the project, incorporating the project accounts, including the Designated Account Reconciliation, and SOE Withdrawal Schedule; as well as a Management Letter. Audit reports will be submitted to the Bank not later than six months after the end of the fiscal year to which they relate. The PMU will provide the auditor with full access to project-related documents and records, and the information required for the audit. Sample TORs for extended financial audit of the project will be included in the Project Operational Manual.

Audit Requirement (included in the Financing Agreement):

<i>Audit Report</i>	<i>Due Date</i>
Continuing Entity financial statements	N/A
Project financial statements (PFS). The PFS include Project Balance Sheet, Sources and Uses of Funds, Uses of Funds by Project Activity, SOE Withdrawal Schedule, Designated Account Statement, and Notes to the financial statements, and Reconciliation Statement	Within six months of the end of each fiscal year and also at the closing of the Project

The risk associated with external audit is *moderate*.

F. Supervision Plan

29. As part of its project supervision missions, the Bank will conduct risk-based financial management supervisions, at appropriate intervals. These will pay particular attention to: (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) review of the Interim Un-Audited Financial Reports; (iv) review of audit reports, including financial statements, and remedial actions recommended in the auditor's Management Letters; (v) disbursement management and financial flows arrangements (and may include a review of a sample of SOE's and movements on the Designated Accounts for each funding source), including flow of funds to the individual workers' accounts, and counterpart funds, as applicable. FM supervision will pay particular attention to any incidences of corrupt practices involving project resources, including resources provided by the recipient and other donors.

30. Progress reports on project implementation will be monitored in detail during supervision missions. The IFRs 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 PMU.

Annex 8: Procurement Arrangements

TAJIKISTAN: PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

General

1. Procurement for the Public Employment for Sustainable Agriculture and Water Management Project (PESAWMP) will be carried out in accordance with the World Bank “Guidelines: Procurement under IBRD Loans and IDA Credits,” published in May 2004 and revised in October 2006 (Procurement Guidelines); and “Guidelines: Selection and Employment of Consultants by World Bank Borrowers,” published in May 2004, and revised in October 2006 (Consultant Guidelines); and the provisions stipulated in the Grant Agreement (GA). The procurement actions under different expenditure categories are described below. For each contract to be financed under the GA, procurement or consultant selection methods, pre-qualification requirements, estimated costs, prior review requirements, and time frame have been agreed between the Recipient and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. A General Procurement Notice (GPN) will be published in UNDB on-line and in the Development Gateway’s dgMarket in due course before the procurement activities take place. Invitations to bid, as the case may be, shall be advertized as Specific Procurement Notices (SPN) in at least one newspaper of national circulation (or in the official gazette, or in an electronic portal with free access). Requests for Expressions of Interest (REI) will be published for all consulting contracts for consulting firms in the national gazette, or a national newspaper, or in an electronic portal of free access as corresponding TORs become ready and available; in addition, consultants’ contracts that cost more than US\$ 200,000 shall be advertized in UNDB online and dgMarket.

2. **Assessment of Agency Capacity to Implement Procurement.** The Bank conducted an assessment of the implementing agencies’ capacity to implement project procurement in March 2010; it is included in the project file.

3. The project covers area of Khatlon Oblast of the Republic of Tajikistan. Procurement activities will be carried out by Ministry of Irrigation and Water Resources (MIRWR) and Administration of Khatlon Oblast through Ferghana Valley Water Resource Management Project Management Unit (PMU), the legal entity established for implementation of ongoing the Ferghana Water Resource Management Project, which will also be a leading operational institution for the implementation of the PESAWMP. PMU staff is established and includes a procurement specialist (PS). The PS specialist has attended several procurement trainings and gained practical experience through on-going Bank financed project. In view of the amount of the financing and the limited complexity of procurement activities to be financed, existing procurement capacity related to the project is considered adequate. However, given that the project represents an increase in implementation activity for the PMU (Additional Financing Grant to the original FVWRMP project estimated at US\$ 10 million is expected), it will be necessary to add more procurement capacity through hiring of a Procurement Assistant (PA)

responsible for assisting PS on the day-to-day delivery of services. The PA should have a basic knowledge of procurement under the WB guidelines.

4. **Procurement Risk Assessment.** The overall procurement risk is rated substantial after mitigation measures. The risks associated with procurement and the mitigation measures were identified in the assessment of agency procurement capacity and are summarized in the table below:

Procurement Risk Assessment

Description of Risk	Risk Rating	Mitigation Measures	Residual Risk Rating
Potential procurement delays: Experience with the past and on-going projects in country shows frequent procurement delays.	H	Careful procurement planning and realistic scheduling; advanced preparation of technical specifications or TORs; further procurement training would be provided during project implementation; close Bank supervision and monitoring, particularly from the country offices.	S
Low level of competition: Past experience indicates the procurement in Tajikistan has not attracted adequate competition; often only one bid was received.	H	Careful procurement packaging to foster competition; wide and advance advertising; proactive search and contact to potential suppliers, contractors or consultants.	S
Inadequate contract management and lower-than-required quality of works or equipment	S	More emphasis and training on appropriate contract management; regular physical inspections by PMU and Bank supervision mission.	M
Perceived high level of corruption as measured by Transparency International. Overall procurement environment is unsuitable for effective procurement.	H	Bank Anticorruption Guidelines (October 15, 2006) and the transparency and disclosure provisions of the Bank Procurement or Consultants Guidelines (May 2004, revised in October 2006) will be enforced.	S
Average	H		S

H: High; S: Substantial; M: Moderate; L: Low.

5. **Procurement Implementation Arrangements.** All procurement activities of the project will be carried out by PMU. The Bank sample shopping documents will be used.

Procurement of Works: Works contracts to be procured under this project would include: the renovation and cleaning of mainly on-farm irrigation canals and drainage infrastructure. International Competitive Bidding is not envisaged because the works will not only be dispersed in scattered locations but also fall below ICB threshold currently used in Tajikistan.

Procurement of Goods: Goods contracts to be procured under the project would include: some auxiliary equipment (excavators, bulldozers, etc.), low cost tools such as shovels, wheel barrows, spikes etc.

Procurement under Community Participation: The procurement procedures used under Community Participation are described in the project operation manual in accordance with paragraph 3.16 of the procurement Guidelines. Community Participation in Procurement will be used for hiring workers in jamoats.

Selection of Consultants: Consultant services contracts to be procured under this project will include: development of detailed designs for civil works; technical supervision; preparation and introduction of Water Basin Management System including: delineation of water basins, an outline of new roles and responsibilities and the institutional infrastructure needed to manage these water basins and development of recommendations on how to move from the current institutional structure to the new one; PMU staff; annual audits; some surveys on project outcome indicators (including physical, agricultural, social and economic indicators); communication and public awareness activities. Shortlists for consultants' services for contracts estimated to be less than USD 100,000 or equivalent may be composed entirely of national consultants. It is also expected that consulting offices associated with local universities may be included in the shortlists. University-based consultants will not be given preference over other private consultants.

Training: Trainings would be carried out according to annual training plans to be prepared by the PMU and agreed by the Bank. The institutions for trainings would be selected by evaluating which institutional program would be most useful, availability of services, duration of training, and reasonableness cost.

Operating Cost: These would include office rent, utility and communications, translations, bank charges, office supplies, advertisements, photocopying, mail, and travel expenses. Such costs will be financed by the project as per annual budget approved by the Bank and according to the implementing agency's administrative procedures, which were reviewed and found acceptable to the Bank. Operating costs will not include salaries of civil servants.

6. Technical Issues of Procurement Decisions: The PMU will be responsible for developing technical specifications or TORs in collaboration with implementing agencies and national or international consultants that may be hired to provide needed assistance.

7. Filing and Records Keeping: The PMU will set up adequate filing and record keeping systems during implementation of FVWRMP project, including hard and electronic copies of related procurement documents. Agreed reporting formats are included in the project operation manual.

8. **Procurement Plan.** The PMU has developed an initial Procurement Plan for the whole duration of the project consistent with the implementation plan, which provides information on procurement packages, methods, and Bank review requirements by project appraisal. The procurement plan has been agreed upon between the Recipient and the Bank project team. This plan will be available in the implementing agency's project database and the version without budget will be available on the Bank's external website. The procurement plan will be updated annually or as required to reflect the actual project implementation needs and

improvements in the implementing agency institutional capacity, in agreement with the Bank project team.

9. **Frequency of Procurement Supervision.** In addition to the Bank team prior review, the Implementing Agency capacity assessment recommends ex-post reviews be carried on at least 20 percent of contracts subject to post review. It is expected that a field supervision mission will take place every four months during which post reviews will be conducted. As a minimum one post review report which will include physical inspection of sample contracts including those subject to prior review will be prepared each year. Not less than 10% of the contracts will be physically inspected.

10. **Anti Corruption Measures.** The Bank Anticorruption Guidelines (October 15, 2006) and the transparency and disclosure provisions in the Bank Procurement or Consultants Guidelines (published in May 2004, and revised in October 2006) will be enforced. Among others, the following specific actions would be taken:

- Individuals involved in project management, including procurement, and tender or evaluation committees, must confirm that they have no conflicts of interest, i.e., relationships with suppliers, consultants, or government officials, etc.
- Establish mechanisms to ensure payments to suppliers and contractors are made according to their contract terms without delays.
- Notify the Bank of every complaint received from suppliers or consultants relating to the procurement process; record and deal with these complaints promptly and diligently.
- Maintain up-to-date procurement records and make these available to the Bank staff, auditors.

Annex 9: Economic and Financial Analysis

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

Summary Description and Benefits

1. The project objective is to generate temporal employment and rehabilitate irrigation and drainage infrastructure in selected districts in the Khatlon Oblast as a means to increase household food security. This will be achieved through increased agricultural productivity resulting from the renovation of irrigation and drainage infrastructure supported by measures to improve water management policy. Component I of the Project includes irrigation and drainage systems rehabilitation through a public works program serving some 49,000 ha of arable land in five selected districts of Khatlon Oblast: Farkhor, Kumsangir, Vakhsh, Kubodiyon and Shahrituz. Component II of the project will finance preparatory work for the introduction of a Water Basin Management System including: delineation of water basins, an outline of new roles and responsibilities and the institutional infrastructure needed to manage these water basins.
2. The project is expected to generate substantial incremental benefits in terms of (i) increased agricultural productivity through improved irrigation water supply and soil quality; and (ii) farm areas to be returned to irrigation.
3. The ensuing analysis examines the impact of the Public Works and Renovation of Irrigation and Drainage Infrastructure Component using a farm model. The model estimates the financial impact of the project on farms in terms of incremental gross margin and net margin. The economic analysis studies the economic impact of the project on the national economy by estimating the economic internal rate of return (EIRR), economic net present value of net incremental benefits (ENPV) and benefit to cost ratio. In addition, the analysis includes a sensitivity analysis of variables likely to have a significant impact on the project's economic viability or for which there are considerable risks in the event of a substantial change in the value of parameters such as project cost, yield, area and price.

Method

4. The analysis is based on comparison of with and without project scenarios for a farm model over a 15 year period using a 12 percent discount rate. All project beneficiaries are expected to be dekhon farms with about 10 hectares of farm land similar to one that received the land use certificates under the project.
5. All prices are stated in 2009 constant prices based on National Statistics Committee data for the project oblast. For the economic analysis, financial prices are converted to their efficiency price equivalents. For cotton this is based on export parity prices and for wheat and fertilizers on the basis of import parity prices. For other goods and services the domestic market price net of taxes, duties and subsidies are used and adjusted using a standard conversion factor of 1. For rural unskilled labor a shadow wage rate of 0.8 is used.

6. Among twenty five districts in Khatlon, five districts have been selected. The analysis provided in this Annex is based on averages calculated for these five districts. Similar analysis was performed for every jamoat (32 sub-districts) for the purposes of prioritization of project investments according to the size of expected economic and financial benefits.

Assumptions

7. The total project area is 49,000 ha. Some increase is expected in the cropping area in the without and with project scenario, but no changes are assumed in cropping pattern. Incremental yields as a percentage of without project yields for irrigated crops are assumed to be in the range of 10 -15percent (except for cotton for which a 25 percent yield increase is assumed)

8. Inputs and output farm gate prices are 2009 constant prices based on Oblast Statistics Committee. While the project is likely to lead to some improvement in the quality of output, output prices have conservatively been assumed to remain constant in the “without” and “with project” scenario. The price of seed is assumed to increase in the “with project” scenario as farmers switch from using their own seed to using more expensive and/or tested seeds.

9. The analysis assumed that the WUAs will increase the irrigation water use fee from its current level of US\$4.7 per ha to US\$12 per ha. Reason behind this assumption is that the current level of tariff is insufficient to provide proper operation and maintenance for rehabilitated irrigation and drainage schemes. The analysis provides results on possible impact of the tariff increase on gross margin of the average farm.

10. Regarding the scope and phasing of benefits, the analysis assumes that farmers will start to obtain project benefits one year after completion of rehabilitation of the irrigation and drainage systems. Since the Project’s duration is very short, i.e. eighteen months, once the project ends the rehabilitation works will be fully completed and the benefits for the entire project area will be reached with a one year lag. Therefore, annual incremental benefits start to accumulate in 2010 and reach 100 percent by 2012 and then start to decline back again.

11. The Project will try to address decline in remittance income through public works program. As pointed out earlier remittance income is a critical source of household income, especially for the poor. On average, remittances accounted for 15 percent of household income in 2007. More importantly, remittances accounted for 70 percent of household income among the 23 percent of households that received them (TLSS). Recent analysis suggests that the estimated 50 percent overall drop in remittances has resulted in a 5.3 percent increase in rural poverty. Preliminary estimates show that the project will create a minimum of 6,957 temporary jobs or 20,873 man months of employment - equivalent to 459,211 man-days. On average, each worker will be paid EUR187 per month. The project will thus have a significant direct impact on employment in Khatlon Oblast.

12. A high proportion of Tajikistan’s estimated one million migrant workers are men, therefore there is considerable number of female-headed households. It is estimated that 15 percent of households in the region are female headed households. While women will benefit

from the assets created by public works program under the Project, the labor required for rehabilitation works may limit their access to employment under relative to men. To address this imbalance, women will be included in the decision-making that affects them as project beneficiaries. Wages will also be paid on a piece-work basis as this approach is more favorable to female employment.

Results

13. **Financial Viability for Farmers.** Farmers benefit from increased annual gross margins from crop production, which increase by US\$87 per ha of irrigated land. The financial benefit for the average farm size would be US\$868 (See Table 1).

Table 1. Financial Benefits

	Without	With	Incremental
Per Farm			
Revenue from production (US\$)	11 631	12 983	1 352
Variable costs (US\$)	6 991	7 475	484
Gross Margin (US\$)	4 640	5 508	868
Per ha			
Revenue from production (US\$)	1 163	1 298	135
Variable costs (US\$)	699	747	48
Gross Margin (US\$)	464	551	87

14. **Economic Feasibility.** Based on these results the project is estimated to produce significant economic benefits. The project component yields net incremental benefits with an economic net present value (ENPV) of about US\$10.4 million or US\$214 per ha and a benefit/cost ratio of 5.33 at a discount rate of 12 percent over the next 15 years period. Furthermore, the project component yields an economic internal rate of return (EIRR) of 23.23 percent (See Table 2).

Table 2. Economic Feasibility

ENPV Net Incremental Benefits (US\$)	10,417,153
ENPV Net Incremental Benefits per ha of Total Irrigation Area (US\$)	214
EIRR	23.23%
Benefit to Cost Ratio	5.33

15. **Sensitivity analysis** shows that the project is highly sensitive to yield projections decline. A 20 percent decline in yield, decreases IRR by 5.5 percent. The project is also highly sensitive to area benefiting from improved cropping; a 20 percent decrease in cropping area decreases IRR by 4.5 percent. The project is moderately sensitive to increased project costs, a decline in crop output prices and increased input prices (See Table 3).

Table 3. Results of sensitivity analysis

Variable	Change (-/+)	IRR	% Change in IRR
Base case		23.23%	100%
Percentage of area benefiting from improved cropping decreases from 100% to 80%	-20%	19.83%	56%
Crop yield increase projections decline	-20%	17.8%	62%
Crop output prices decline with and without project	-20%	22.00%	62%
Crop input prices increase with and without project	+20%	21.43%	171%
Project costs increase	+20%	20.43%	159%

Annex 10: Environmental and Social Safeguards Framework

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

1. **Background.** Poverty is widespread in Tajikistan, with an estimated 53 percent of the country's nearly 7 million people living below the poverty line.¹¹ In 2008, the country experienced an energy crisis and pronounced increases in food prices. A high rate of labor migration, as well as civil war, has also resulted in a high incidence of female-headed households. Approximately two-thirds (67.2 percent) of the country's labor force is employed in the agricultural sector,¹² where low agricultural production is a major cause of poor livelihoods. A high proportion of rural households have low incomes and are highly food insecure. Their ability to raise incomes and reduce food insecurity is constrained by poorly managed and maintained irrigation infrastructure.
2. Chronic food insecurity is evident throughout the country, varying in degree from moderate (9 percent) to severe (22 percent).¹³ Khatlon, along with Sughd region, are the most food insecure regions due to increased food prices, limited employment opportunities, low earning potential, erratic remittances and the reliance on cotton. Female-headed households, unskilled laborers and families with many dependents are especially vulnerable to the variability of remittances.
3. This social annex is based on a desk review of the available literature on socio-economic conditions in Tajikistan, including a review of donor technical assistance reports, studies by local and multilateral organizations, and rapid social assessment in the project area. The findings and recommendations will be expanded and tested during a planned in-depth social assessment based on field-work in the project areas.
4. The project objective is to generate temporal employment and rehabilitate irrigation and drainage infrastructure in selected districts in Khatlon Oblast as a means to increase household food security. Food security will be increased directly in the short-term through the income earned by food insecure households from public works (food access), in the medium-term through increased crop production as a result of improved irrigation and drainage (food availability), and in the long-term through the project's contribution to improving water resource management policies. These measures complement and extend Government's efforts to mitigate the effects of the financial crisis and the associated reduction of remittance income on the rural poor. The rehabilitation work will take place in five project districts with high levels of food insecurity: Farkhor, Vakhsh, Kumsangir, Kubadion and Shaartuz.

¹¹ Coordination Team of the UN System High-Level Task Force on the Global Food Security Crisis (HLTF), Tajikistan Country Visit Report, April 9-12, 2009, p. 3.

¹² HLF, Tajikistan Country Fiche, November, 2009, p.3.

¹³ WFP and UKaid, Tajikistan Food Security Bulletin, #5, December 2009, p1.

5. **Stakeholders.** Identifying and understanding the key stakeholders in the project is important for project design, implementation and success. The main stakeholders are as follows:
- *Household level:* (a) vulnerable households with acute food insecurity; (b) women - headed households; (c) unemployed and seasonally inactive workers.
 - *Community level:* (a) Mahallah committees; (b) other community leaders; (c) Water Users Associations (WUA) where they exist; (d) social self- mobilizing groups (through *khashar* method).
 - *Institutional level:* (a) Ministry of Irrigation and Water Resources (MIRWR); (b) Local branches of the Ministry of Irrigation and Water Resources (*oblvodkhoz*es and *raivodkhoz*es); (c) Regional and local *Khukumats and Jamoats*; (d) Working Group on Agricultural Reforms (water sector thematic group); (e) Ministry of Labor and Social Protection; (f) donor community.
6. Studies related to irrigation infrastructure projects in Tajikistan together with field interviews report that at the community and household levels stakeholders view water use as essential for survival. As economic activities in the rural areas can be stalled without water, both direct project beneficiaries and community groups have a vested interest in the efficient delivery and use of water. At the institutional level MIRWR, and its affiliates at regional and district level are constrained in their capacity for management, regulatory oversight and enforcement. Improved irrigation will alleviate some pressure on the budget and resource constrains of the MIRWR.¹⁴
7. The donor community, including the World Bank, ADB, FAO, WFP and other UN agencies has responded to food insecurity with varying forms of aid and programmatic interventions. However there is a need for better donor coordination in order to create a more effective long-term response to food insecurity. This project responds to the need for a sustainable response to food insecurity by improving agricultural output through the rehabilitation of irrigation and drainage infrastructure.

Social Risks and Mitigation Measures.

8. **Participatory Approach.** International experience shows that the active participation of stakeholders, including direct beneficiaries, community and non-governmental organizations, local and national government representatives, and other groups contributes strongly to project success. In this context, the project will seek active involvement of all stakeholders in order to increase local ownership of project activities. The willingness of local communities to participate in project activities, including participation in *khashar* method, as envisioned in the project design, is crucial for its successful implementation. Consultations with direct project beneficiaries and institutional stakeholders will facilitate identification of key problems and shortcomings, which could be encountered during project implementation.

¹⁴ Asian Development Bank, Rural Development Project, 2006, page A20-4

Based on the results of these consultations with stakeholders, methods and procedures for effective involvement of the communities in project implementation will be designed.

9. **Conflict Mitigation.** Conflict mitigation measures identified through stakeholder consultations will minimize the potential for conflicts related to the implementation of public works. Based on World Bank experience with public works programs (PWP) a mediation mechanism will be established to protect the rights of the poor, through local NGOs or other entities. At the local level, the most widely applied methods of conflict resolution are mutual agreements, mediation through neighbors, village elders, mahallah and Jamoat leaders.
10. Potential conflict during the implementation of public works can arise from (i) intolerance to the use of “outsiders” in communities where man- power is not sufficient or lacking; (ii) cultural sensitivity of women to the presence of male laborers on their farming plots, especially in women- headed households; (iii) intolerance to localized temporary disruptions to access to water for household use (in cases where water from irrigation system is used for these purposes); (iv) possible disruptions associated with noise, dust etc. Mitigation measures in response to these issues will be included in the design of the public awareness plan.
11. **Public Awareness.** Informed stakeholders are key for effective participation by project beneficiaries. Public awareness thus plays an important role in developing stakeholder ownership of the project, through outreach to and engagement of a greater number of beneficiaries.
12. A public awareness campaign will be implemented as part of the communication strategy to ensure that information about the project is widely accessible. This plan will be designed in consultation with communities and local authorities, especially through focus group discussion with beneficiaries. The campaign will be implemented based on the most effective modes of communication (newspapers, radio, TV announcements, message boards, flyers etc) in languages spoken in the communities. In addition, information will be publicly available through the information and advisory services in each of the project districts.
13. **Gender and Child Labor Issues.** Women make an important contribution to agricultural production in Tajikistan. They are usually in charge of garden and household plots, which are often the main source of food, and are responsible for the daily feeding of livestock. They also play an active role in cotton-picking, often at very low wages.
14. Due to civil war and labor migration of males, many women play multiple roles - earning income and taking care of the household and children on their own. Anecdotal evidence suggests that after 12 months, many men send little or no remittances back to their families. Women in these circumstances face severe social and psychological pressure as they assume a disproportionate burden of the responsibility for family livelihood. Yet despite their indispensable role in agricultural production, women continue to be reluctant or have a limited role in decision-making. This makes it very difficult for women in single-headed households¹⁵.

¹⁵ Agricultural Activities, Water and Gender in Tajikistan’s Rural Sector: A Social Assessment of Kanibodom, Bobojon Ghafurov, and Yovon. World Bank, August 2008, p 33.

15. While women will benefit from the assets created by public works, the labor required for rehabilitation works may limit their access to employment relative to men. To address this imbalance, women will be included in the decision-making that affects them as project beneficiaries. Wages will also be paid on a piece-work basis as this approach is more favorable to female employment. The project should also ensure that there is full compliance with national legislation concerning health and labor safety, for both men and women.
16. Tajikistan has made progress in enforcing the law on child labor, but still needs to develop adequate measures to monitor and ensure respect for this law. This can be achieved by ensuring strict compliance with the Tajik Labor Code – particularly with respect to age, working hours, labor conditions and student/non-student status. To mitigate the potential for child labor use in the project, proper documentation to verify the age of employees will be a condition of participation in the public works. Potential beneficiaries will also be informed about the requirement for compliance with child labor laws through the public awareness campaign.
17. **Transparency and Accountability.** To ensure full transparency and accountability the Public Works program should monitor participants to verify that they receive the payments that are due to them. A list of workers will also be displayed at each worksite to further improve transparency and allow for community level oversight. It will also be important to ensure that the work-day accounting system is used correctly, and that beneficiaries receive their payments from the State Savings Bank in a timely fashion. A grievance mechanism will be established for project beneficiaries to monitor and ensure compliance with these conditions.
18. All of these issues will be included in the communication strategy. Jamoats will also be informed of the selection criteria for sub-projects, as part of this campaign. They will thus be in a better position to make a case for project support in the event that they are excluded for inappropriate reasons.
19. **Monitoring and Evaluation.** The baseline assessment to be used as the basis for project monitoring and evaluation would determine the socio-economic and demographic profiles of project and non-project villages in the project area. These profiles should be based on some or all of the following parameters: the level of socio-economic development, income and food insecurity levels, population composition and density (including gender composition), ethnicity, religion and geography. A further range of qualitative and quantitative indicators will be developed to assess: (i) the ratio of available workforce to the demand; (ii) number of people able and interested in participating in project activities (iii) willingness to work for the project wage rate; (iv) disincentives to project participation; (v) the types of seasonal activities in which potential beneficiaries are normally engaged; (vi) the amount of time that potential project beneficiaries are willing and able to devote to participation in project activities.
20. A qualitative evaluation of past World Bank Public Works projects indicates that there are positive effects to the well-being of beneficiaries, in addition to explicit economic benefits.

These additional benefits include: decreased likelihood of selling assets to buy food; increased percentage of children of project beneficiaries who enrolled in school; and more frequent use of healthcare facilities¹⁶. Indicators of these benefits should also be incorporated into the baseline survey and included in the monitoring and evaluation of project outcomes. The learning outcomes of the training for different stakeholders should also be actively monitored.

Environmental safeguards

21. *Project Location.* The project will be implemented in *Khatlon* region which is located in South Tajikistan and has a territory of 24.8 thous. sq.km. It covers two agro-climatic areas – Vakhsh and Kulyab, which are characterized by high temperatures and long-term frost-free period. Khatlon region has a population of 2.3 million people, or about one third of the national figure. The vast majority of its residents live in rural areas, about 1.9 million people versus about 400 thousand urban settlers. Due to deforestation, improper irrigation and excessive use of agricultural lands combined with unregulated chemical inputs the region's land resources are affected by salinization, wind/water erosion and water logging. A large part of the irrigation and drainage infrastructure is in danger of collapse.

22. *Project category.* In accordance with the Bank's safeguard policies and procedures, including OP/BP/GP 4.01 *Environmental Assessment*, the project relates to the Bank's B Category. For such projects it is necessary to conduct an Environmental Assessment and to prepare a site specific Environmental Management Plan. Taking into account the proposed rehabilitation activities would be similar it is proposed to prepare a generic Environmental Management Plan. This EMP will be adjusted to the concrete conditions of the selected irrigation scheme.

23. *Purpose of Generic Environmental Management Plan.* The purpose of the Environmental Management Plan was to provide the World Bank's and national rules and procedures for project Environmental Impacts Assessment (EIA), identify the significant environmental impacts of the project (both positive and negative), to specify appropriate preventive actions and mitigation measures (including appropriate monitoring scheme) to prevent, eliminate or minimize any anticipated adverse impacts on environment. The EA report was prepared by a local consultant based on the following: (i) analysis of the existing national legal documents, regulations and guidelines; (ii) World Bank safeguard policies, as well as other guiding materials; (iii) existing EMPs for similar World Bank projects; and (iv) results of consultations with the representatives of stakeholders and all interested parties.

24. *EA Institutional capacities to perform environmental safeguards.* The project will be implemented by the Ministry of Irrigation and Water Resources (MIRWR) in close collaboration with the regional government offices in Khatlon. The PMU established under the existing WB funded irrigation water projects will be used for the implementation of the project. While the existing PMU has some experience in implementing environmental safeguards it will need further capacity building. The EA report proposes a special capacity building program to be financed under the project.

¹⁶ Carlo de Ninno, Klandhi Subbarao and Annamaria Milazzo, "How to Make Public Works Work: A Review of the Experiences," 2009. Social Protection Paper No. 905. Washington DC, World Bank, p. 53

25. *Potential environmental impacts.* The project will support mostly on farm and drainage infrastructure rehabilitation activities, as mentioned above. The civil works consist mostly of earth moving, concrete works, rehabilitation of existing canal structures, all of which are fairly small scale works. The great majority of these activities will be done manually. None of them will cause significant environmental impacts. However, they might cause adverse environmental impacts and would fall under the Category B projects, for which the Bank required a simple Environmental Management Plan. Furthermore, as the selected subprojects are located on the existing irrigation areas, none of them will have impacts on protected areas, critical habitats or culturally or socially sensitive areas. The proposed rehabilitation of irrigation infrastructure might generate environmental impacts such as water logging and salinization; soil erosion and degradation of adjacent natural habitats and factory species; dumping of excavated sediments and other materials from irrigation and drainage canals, structures; etc.

26. *Positive impacts.* Improvements of the irrigation systems would increase agriculture production, prevent the risk of decreased productivity of irrigated land, protect natural “assets”, and prevent the degradation of soil fertility. The reduction in water losses and improved irrigation distribution will also reduce seepage losses from main canal and over-supply of irrigation, with a beneficial effect for the area: a lower water table, a lower risk of salinity, and less stagnant water pools in the village causing health problems. The project will bring also a number of both direct and indirect positive social impacts. Direct positive impacts will be generated by increased production, more employment and increased income. Indirect positive impacts will relate to overall contribution to poverty reduction and health.

27. *Impacts on international waterways.* Although the project area covers international waterways, the proposed investments under the project are only for renovation of irrigation canals, and improvements of drainage infrastructure along with the purchasing agricultural machinery, which are not expected to change the volume of extraction/discharge water or quality of water of these rivers, but rather it will lead to more effective irrigation and drainage of the water. Thus the project implementation would improve the transboundary water resources use and quality. At the same time, per stipulations of the Bank OP/BP 7.50, the project triggers Operational Policies on International Waterways. Since the proposed works will involve rehabilitation and improvement of existing irrigation and drainage systems and no new schemes will be developed, the project team had sought and obtained the waiver from the Bank’s notification requirement.

28. *Environment Management Plan (EMP).* The project EMP ensures that the proposed prevention/mitigation measures and monitoring activities identified in the EA will be properly undertaken during the project implementation. The EMP also establishes the necessary institutional responsibilities, proposes a timetable for implementing these activities and estimates their costs for that are integrated in the proposed project budget. The EMP will include the following: (a) short description of applicable laws, policies on environment procedures for EA as well as EA institutions and responsibilities; (b) Environmental Guidelines (EG) specifying: (i) potential environmental and social impacts of the rehabilitation of irrigation canals, improvements of drainage infrastructure activities; (ii) proposed mitigation and monitoring measures to be applied during the project implementation; (c) description of implementing

arrangements, including supervision and monitoring, as well as reporting; and (d) analysis of the EA institutional capacity of the implementing agencies along with the proposed technical assistance to adequately implement the EA requirements for the subprojects to be supported.

29. *EMP disclosure and consultation.* The Project Management Unit (PMU) has disseminated the draft summary EMP to the Ministry of Agriculture, State Committee for Environmental Protection, and other relevant ministries for their review and comments, and also, on March 26, 2010, the document was posted on websites of the CAREC (www.carecnet.org) and Aarhus center in Dushanbe (www.aarhus.tj) for its access to wide public. On May 13, 2010, the PIU has organized a consultation on Draft Environmental Assessment and Generic Environmental Management Plan. After the consultation, draft document was revised to consider inputs from consulted parties. On May 19 2010, the final draft generic EMP was posted on the website of the Ministry of Irrigation and Water Resources and submitted to the World Bank for its disclosure in Infoshop.

Annex 11: Project Preparation and Appraisal Team Members

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

Bank Team	
Shamsiev, Bekzod	TTL, Senior Agriculture Economist
Yatimov, Bobojon	co-TTL, Senior Rural Development Specialist
Abdysheva, Sarina	Institutional Development Specialist, FAO
Alibaev, Darman	Irrigation Specialist, Consultant
Aliev, Jovidon	Economist, Consultant
Aslonov, Yusujon	Irrigation Specialist, Consultant
Balakov, Alexander	Procurement Specialist, ECSPS
Bernstein, Janis	Senior Environmental Specialist, ECSSD
Capcelea, Arcadie	Environmental Specialist, ECSSD
Christensen, Garry	TA Component, Consultant
Doishenkul Kyzy, Dinara	Financial Management Specialist, Consultant
El-Hanbali, Usaid I.	Irrigation Specialist, Consultant
Gadoev, Shamsiddin	Engineer, Consultant
Gerber, Daniel	Rural Development Specialist, ECSSD
Iacovlenco, Irina	Translator, Consultant
Ibragimova, Lola	Social Development Issues, Consultant
Ibraimova, Elmira	Anti-corruption Issues, Consultant
Imomov, Bobohuja	Irrigation Specialist, Consultant
Kabayeva, Jeren	Project Operations, ET Consultant
Karamete, Ebru	Economist, ET Consultant
Klemm, Walter	Irrigation Engineer, FAO
Koilpillai, Hannah	Senior Finance Officer, CTRFC
Kseniia Malenko	Finance Analyst (Disbursement), CTRDM
Mwenda, Kenneth	Country Lawyer, LEGEM
Mukhitdinova, Farzona	Program Assistant, ECCTJ
Murodov, Anvar	Social Development Issues, Consultant
Nazarov, Shodi	Financial Management Specialist, ECSPS
Noble, Beaulah	Program Assistant, ECSSD
Pauline Zwaans	Operations Analyst, ARD
Safarov, Muradali	Rural Livelihoods Specialist, Consultant
Safarov, Zaydullo	Engineer, Consultant
Sampath, T.V.	Agriculturalist, Consultant
Satybekov, Askar	Procurement Issues, Consultant
Schreiber, Götz	Operational Advisor, Consultant
Sharipova, Svetlana	Social Development Issues, Consultant
Peer Reviewers	
Keller, Barbry	Senior Country Officer, AFCGH
Townsend, Robert	Senior Economist, ARD

Annex 12: Documents in Project Files
REPUBLIC OF TAJIKISTAN
PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER
MANAGEMENT PROJECT

1. Agriculture Sector Growth in Tajikistan: Opportunities and Constraints, Background Report for World Bank Country Economic Memorandum, World Bank, October 2009
2. Crop and Food Assessment Report, FAO, October 2009;
3. Emergency Food Security and Seed Import Project, Preliminary Project Evaluation, World Bank;
4. Malawi Public Works Program Handbook, World Bank;
5. Systematic shocks and social protection: Role and effectiveness of public works programs. World Bank. January 2003.
6. Tajikistan Food Security Bulletin for September and December 2009; WFP and UKAID
7. Tajikistan Water Sector Development Program, OSCE, November 2009;
8. Tajikistan: Emergency Food Security and Seed Imports Project: Project Evaluation and Impact, World Bank;
9. Tanzania Public Works Program Handbook, World Bank;

Annex 13: Statement of Loans and Credits

**REPUBLIC OF TAJIKISTAN
PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER
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
P099840	2009	PFM Modernization Project	0.00	5.00	0.00	0.00	0.00	5.42	1.92	0.00
P110555	2008	ENERGY EMERGENCY	0.00	6.50	0.00	0.00	0.00	3.53	3.85	0.00
P098889	2007	COTTON SEC RECOV	0.00	15.00	0.00	0.00	0.00	14.59	9.14	0.00
P096861	2007	PUBLIC SECTOR REFORM TA	0.00	5.00	0.00	0.00	0.00	2.71	1.88	0.10
P100451	2006	AVIAN FLU - TJ	0.00	5.00	0.00	0.00	0.00	1.11	0.79	0.00
P078978	2006	COMM & BASIC HEALTH	0.00	15.00	0.00	0.00	0.00	4.97	-1.19	0.01
P079027	2006	MUNI INFRA	0.00	15.00	0.00	0.00	0.00	4.09	2.70	0.00
P084035	2006	FERGHANA VALLEY WATER RES	0.00	13.00	0.00	0.00	0.00	3.98	2.51	0.00
P098410	2006	TAJSTAT	0.00	1.00	0.00	0.00	0.00	0.00	-0.11	0.00
P089566	2005	LAND REGIS & CADASTRE	0.00	10.00	0.00	0.00	0.00	5.18	3.22	-0.43
P089244	2005	ENERGY LOSS REDUCTION	0.00	18.00	0.00	0.00	0.00	5.61	-4.82	0.00
P077454	2004	COMMTY AGRIC & WATERSHED MGMT	0.00	10.80	0.00	0.00	0.00	2.05	-3.28	0.00
P069055	2003	EDUC MOD	0.00	20.00	0.00	0.00	0.00	3.57	1.16	0.00
P075256	2002	PAMIR PRIV POWER	0.00	12.50	0.00	0.00	0.00	2.49	-1.67	-1.67
P057883	2002	DUSHANBE WS	0.00	22.00	0.00	0.00	0.00	4.03	-4.22	0.91
Total:			0.00	173.80	0.00	0.00	0.00	63.33	11.88	- 1.08

**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.
	Eskhata Bank	0.96	0.00	0.00	0.00	0.66	0.00	0.00	0.00
2003	Giavoni	0.00	3.00	0.00	0.00	0.00	3.00	0.00	0.00
2002	Pamir Energy	4.50	0.00	0.00	0.00	4.50	0.00	0.00	0.00
2005	SEF AKFED MB Taj	0.00	0.67	0.00	0.00	0.00	0.67	0.00	0.00
2006	SEF AKFED MB Taj	0.00	0.18	0.00	0.00	0.00	0.18	0.00	0.00
2002	SEF FOM	0.19	0.00	0.00	0.00	0.19	0.00	0.00	0.00
2004	SEF FOM	0.50	0.00	0.00	0.00	0.25	0.00	0.00	0.00
2002	SEF Telecom Tech	0.09	0.00	0.00	0.00	0.09	0.00	0.00	0.00
Total portfolio:		6.24	3.85	0.00	0.00	5.69	3.85	0.00	0.00

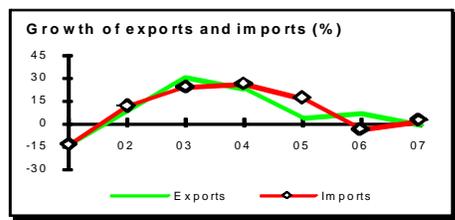
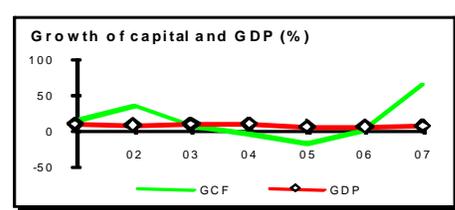
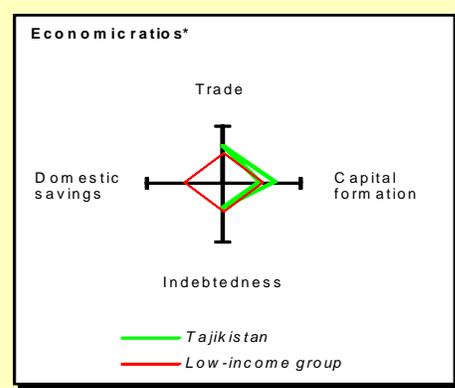
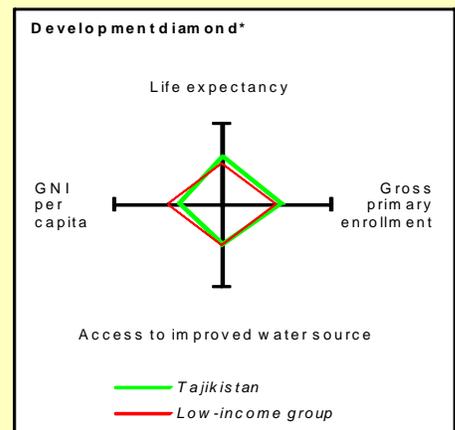
		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2006	Pamir II	0.00	0.00	0.00	0.00
Total pending commitment:		0.00	0.00	0.00	0.00

Annex 14: Country at a Glance
REPUBLIC OF TAJIKISTAN
PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER
MANAGEMENT PROJECT

Tajikistan at a glance

4/2/10

POVERTY and SOCIAL	Europe & Central Asia				
	Tajikistan	Asia	Low-income		
2008					
Population, mid-year (millions)	7.5	460	2,403		
GNI per capita (Atlas method, US\$)	640	4,796	650		
GNI (Atlas method, US\$ billions)	4.8	2,206	1,562		
Average annual growth, 2000-06					
Population (%)	2.1	0.0	1.9		
Labor force (%)	3.2	0.5	2.3		
Most recent estimate (latest year available, 2000-06)					
Poverty (% of population below national poverty line)	..	..	..
Urban population (% of total population)	26	64	30		
Life expectancy at birth (years)	72	69	59		
Infant mortality (per 1,000 live births)	85	28	75		
Child malnutrition (% of children under 5)	..	5	..		
Access to an improved water source (% of population)	..	92	75		
Literacy (% of population age 15+)	..	97	61		
Gross primary enrollment (% of school-age population)	103	102	102		
Male	104	103	108		
Female	102	100	96		
KEY ECONOMIC RATIOS and LONG-TERM TRENDS					
	1996	2000	2008	2009	
GDP (US\$ billions)	1.0	0.9	5.1	5.0	
Gross capital formation/GDP	40.2	19.5	4.7	4.7	
Exports of goods and services/GDP	76.6	98.8	16.8	16.4	
Gross domestic savings/GDP	5.6	1.4	30.9	26.9	
Gross national savings/GDP	4.3	3.0	46.6	47.6	
Current account balance/GDP	-7.9	-1.9	-7.7	-7.3	
Interest payments/GDP	7.3	7.8	1.5	1.7	
Total debt/GDP	74.1	122.8	42.1	44.5	
Total debt service/exports	20.0	15.9	3.9	3.7	
Present value of debt/GDP	..	..	..	..
Present value of debt/exports	..	..	..	..
	1990-96	1996-06	2008	2009	2009-12
(average annual growth)					
GDP	-11.9	6.2	7.9	3.4	4.4
GDP per capita	68.8	16.7	35.3	-5.0	4.6
Exports of goods and services	54.0	0.9	12.8	-5.5	6.3
STRUCTURE of the ECONOMY					
	1996	2007	2008	2009	
(% of GDP)					
Agriculture	36.0	19.8	21.8	19.9	
Industry	29.2	24.0	23.7	21.0	
Manufacturing	18.8	13.3	10.7	9.6	
Services	7.8	2.1	1.8	1.7	
Household final consumption expenditure	64.3	114.3	112.6	95.0	
General govt final consumption expenditure	16.8	17.5	29.0	28.3	
Imports of goods and services	80.0	68.8	72.1	56.7	
	1990-96	1996-06	2008	2009	
(average annual growth)					
Agriculture	313.4	61.6	51.7	7.0	
Industry	307.8	58.4	36.1	3.9	
Manufacturing	310.0	58.3	10.6	5.4	
Services	321.5	89.4	32.4	31.3	
Household final consumption expenditure	-7.5	8.0	5.1	4.9	
General govt final consumption expenditure	4.9	0.3	1.2	1.2	
Gross capital formation	-12.3	-9.1	0.9	-1.1	
Imports of goods and services	-9.5	5.3	17.6	7.7	



This table was produced from the Development Economics LDB database.

*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.

Annex 15: Maps

REPUBLIC OF TAJIKISTAN PUBLIC EMPLOYMENT FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT PROJECT

