I. BASIC INFORMATION

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Tajikistan</th>
<th>Project ID:</th>
<th>P158576</th>
</tr>
</thead>
</table>

**Project Name:** Zarafshon Irrigation Rehabilitation and River Basin Management Project (P158576)

**Region:** EUROPE AND CENTRAL ASIA

**Estimated Appraisal Date:** 06-Oct-2016

**Estimated Board Date:** 01-Dec-2016

**Practice Area (Lead):** Water

**Lending Instrument:** Investment Project Financing

**Borrower(s):** MINISTRY OF FINANCE

**Implementing Agency:** FVWRMP PMU under the Agency for Land Reclamation and Irrigation, Agency for Land Reclamation and Irrigation

<table>
<thead>
<tr>
<th>Financing Source</th>
<th>Amount</th>
</tr>
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<tbody>
<tr>
<td>Borrower</td>
<td>0.00</td>
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<tr>
<td>European Commission Development Fund - TF</td>
<td>16.06</td>
</tr>
<tr>
<td>Financing Gap</td>
<td>0.94</td>
</tr>
<tr>
<td>Total Project Cost</td>
<td>17.00</td>
</tr>
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</table>

**Environmental Category:** B - Partial Assessment

**Concept Review Decision:** Track I - The review did authorize the preparation to continue

**Is this a Repeater project?** No

**Other Decision (as needed):**

B. Introduction and Context
Country Context

1. Tajikistan is the smallest and poorest of the Central Asian countries, with a population of 8.8 million and a GNI/capita of US$1080 in 2014. It has grown steadily since the global financial crisis, with average annual GDP growth of 7.1 percent from 2010-2014. While this growth has been broadly based on the performance of sectors such as construction and services, it is highly variable as it relies heavily on remittances, which amount to as much as 50 percent of GDP. Fluctuating commodity prices for aluminium and cotton exports are a further source of (exogenous) instability, as is the price of imported energy. The country’s economic performance thus remains highly vulnerable to exogenous shocks. A weak banking sector and the lack of well-targeted social programs increases this vulnerability, for both businesses and households. Despite this vulnerability, poverty has fallen significantly in response to a decade of growth, with poverty rates now estimated at 32 percent according to official statistics.

2. The recent slowdown of global economic growth and contraction of the Russian economy will reduce the pace of economic growth and poverty reduction, although current forecasts suggest that this slowdown will be moderate. GDP growth is expected to slow from 6.7 percent in 2014 to 4.2 percent in 2015 and then recover to 5.5 percent by 2017. Poverty rates will also fall more slowly, to an estimated 27 percent by 2017, due largely to a 30 percent fall in remittances during 2015. Exchange rate instability will increase in response to these adverse global trends, however, as will the systemic risks in the banking sector. A small budget surplus and low public debt provide some margin for government to increase public expenditure in response to these trends, but this response will have to be well conceived and implemented if it is to stimulate growth and offset lower rates of poverty reduction.

3. Continued structural reform is needed to create a more sustainable basis for economic development, less dependent on remittances as the engine of growth. Measures to improve infrastructure, better match education to the economy’s needs and streamline regulation are the priorities in this context, in order to improve investment and create more employment.

Sectoral and Institutional Context

4. With 23 percent of GDP and 66 percent of employment (TajStat 2014), the agriculture sector has a major influence on the performance of the Tajik economy. The sector continues to grow steadily in response to structural reform, with annual growth averaging 9 percent from 2009-2013. This growth has been driven by land reform, liberalization of the domestic market for cotton, the reduction of local government interference in farmer decisions and a nascent increase in the commercialization of agriculture.

5. Continued agriculture sector growth is also critical for poverty reduction, as 77 percent of Tajikistan’s poor live in rural areas. Although sector growth has contributed to a significant observed fall in rural poverty, estimated at 28 percent in 2014, its impact is still offset by adverse trends in remittance income (World Bank, Tajikistan Economic Update No. 2, Fall 2015). Farm incomes need to rise further, as a function of their productivity, in order to reduce the sector’s vulnerability to exogenous shocks. While agriculture sector reform has significantly raised the incentive for farmers to increase output, productivity levels remain low by regional and western standards. Average yields for the top three crops (fodder, potato, wheat) in the area are lower compared to their regional competitors; e.g. wheat yields in Tajikistan is estimated at a range of 2.1-2.3 t/ha, compared to 4.7-4.9 t/ha in Uzbekistan (FAO, 2014).

6. Low quality irrigation and irrigation inefficiency, estimated only in a range of thirty
percent, are among the underlying constraints in achieving higher crop productivity.

Country’s irrigation system is highly water and energy intensive with more than ninety percent of water withdrawals allocated for use in agriculture and forty-four percent of cultivated land reliant on pump irrigation. However, the actual mix between pumped and gravity irrigation is unknown, as many pump stations no longer work, and primary drainage and irrigation canals have silted up due to lack of public funds for cleaning. Regular maintenance of secondary and tertiary canals has stopped due to ill-defined property rights over this infrastructure.

7. The Agency for Land Reclamation and Irrigation (ALRI), recently established to replace a former Ministry of Melioration and Water Resources, is a key agency responsible for operation of irrigation and drainage systems. Management at the system level is little changed from its pre-1990 configuration. ALRI management is still based on traditional administrative boundaries (oblast and rayon), is paper-based, relies on qualitative rather than quantitative information on water flows and water deliveries, and employs centrally-directed command and control practices.

8. The institutional capacity to assume responsibilities over on-farm infrastructure is weak at local level, due to the slow development of Water User Associations (WUAs) and poor links between WUAs and the local and regional public institutions responsible for water management. Limited budget resources and an outmoded policy and institutional framework hamper government’s ability to respond to these constraints at national level.

9. In response to the need for improved water resource management, the Government of Tajikistan (GoT) has begun a reform of the water sector in order to promote a more sustainable and productive use of water resources. Presidential Decree No. 12, of November 2013 provides the foundation and legal basis for water sector reform - based on the principles of Integrated Water Resources Management (IWRM). It has resulted in formation of the Ministry of Energy and Water Resources (MEWR), following a merger of the management function of the former Ministry of Land Reclamation and Water Resources and former Ministry of Energy. Another important milestone in implementation of the water sector reform in the country was achieved in December 2015 through the GoT approval of the Water Sector Reform Program for 2016-2020.

10. World Bank support for water sector reform and improved irrigation began in 2010 with a one-year EU funded emergency project (PAMP) to improve food security in the aftermath of the global financial crisis, which also initiated the introduction of IWRM. This was followed in 2012 by a repeater project (PAMP II) funded by the Bank and the Global Agriculture and Food Security Program (GAFSP). The longer time frame for PAMP II (7 years) allows a greater emphasis on building local, regional and national capacity for the introduction of IWRM. Together, these two projects have facilitated the rehabilitation of irrigation and drainage infrastructure throughout Khatlon province, located in the south of the country, the largest and most important region for agriculture production, and in the Districts of Republican Subordination. In combination with projects by the European Union and the Swiss Development Corporation, the PAMP II project is also working actively to improve the legal and institutional base for IWRM at local, regional and national level.

Relationship to CAS/CPS/CPF

11. The proposed project is aligned with the World Bank twin goals to reduce poverty and promote shared prosperity. By improving water resource management and rehabilitating irrigation infrastructure it will facilitate increased crop production and farm incomes, so improving food
security and reducing poverty in rural areas. These outcomes are also aligned with the new CPS for FY15-18, which aims to support private sector growth and further increase productivity in agriculture. The project also builds on the achievements of past and current projects, and furthers the structural reforms needed for sustainable growth and development. Funded by a grant from the European Union, the project also reflects the aims of the Donor Coordination Council to improve the coordination and complementarity of donor activities.

C. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)
The project development objectives are to: (i) strengthen the institutional base for irrigation planning and management in the Zarafshon sub-basin following IWRM principles and (ii) improve the condition and management of irrigation and drainage infrastructure in the Zarafshon sub-basin and adjacent districts in the Syr-Darya basin. The project will improve the food security of rural people in the project areas.

Project Beneficiaries will include: River Basin management authorities, the Agency for Land Reclamation and Irrigation (ALRI), the Ministry of Energy and Water Resources (MEWR), Water User Associations, agricultural producers who benefit from increased productivity and farm incomes, and rural households who benefit from improved food security.

Key Results (From PCN)
14. Key results, which will be used to measure achievement of the PDOs will include:

   (i) Area provided with new/improved irrigation and drainage services (ha)
   (ii) Strengthened basin-level ALRI operations, defined as:
        a. an ALRI organizational structure based on system hydraulic boundaries
        b. installation and use of financial management software employing irrigation systems as cost centers
        c. number of operational WUAs created/or strengthened, and
        d. complete coverage of all system areas with volume-based service contracts with WUAs
        e. operation and maintenance procedures for planning and management developed and under implementation in ALRI
   (iii) Inventory of irrigation systems and hydraulic structured developed and used for decision making
   (iv) In addition, increased crop yields will provide a measure of the project’s impact on crop productivity, and increased Food Insecurity Experience Scores will be used to assess the project’s impact on household food security.

D. Concept Description

15. Project design will be based on the same structure as the successful PAMP II project, based on the following components: (i) rehabilitation of irrigation and drainage infrastructure, (ii) support for institutional strengthening of the irrigation sector following the principles of IWRM, and (iii) project management. It will place greater emphasis on the institutional strengthening component, however, in contrast to the emphasis of PAMP and PAMP II on the rehabilitation of irrigation and drainage infrastructure.

16. Funding of 15.6 million euros is available under the EU Trust Fund Administration
Agreement between the World Bank and the European Union. This funding will leverage funds available for PAMP II, by extending support and technical assistance to irrigation and drainage institutions at the central and sub-basin level. The project will also work closely with the EU’s Technical Assistance program to provide support to the Ministry of Energy and Water Resources. The following allocation of EU grant funds by components is proposed:

17. Component I: Rehabilitation of Irrigation and Drainage Infrastructure. The project will finance (i) a minor public works program through the rehabilitation of secondary and tertiary on-farm irrigation canals; as well as (ii) major rehabilitation works, the rental and purchase of machinery (excavators, bulldozers), the purchase and installation of irrigation gates, irrigation canal and structure repair works, pipeline network repairs and strategic pump station and vertical drainage well repairs.

18. Component II: Support for water resource management, including technical assistance for policy and institutional reform in the irrigation sector. This component will finance technical assistance and other support to the MEWR, ALRI and other relevant institutions to support irrigation reform, following the IWRM principles.

19. Component III: Project Management. A project management unit (PMU) to be managed under the World Bank-financed PAMP II project will be the main implementation agency. It will be responsible for: implementation and coordination, financial management and procurement, communication and awareness programs, environmental management and safeguards, and monitoring and evaluation. The PMU will also ensure that the communication and visibility measures required by the European Union are implemented. This component will also be responsible for the design, implementation, and analysis and reporting of the baseline and project completion surveys.

II. SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project will strengthen water resource management and improve irrigation infrastructure in the Zarafshon sub-basin and adjacent high potential agricultural areas. The Zarafshon sub-basin, which has a population of 360,000 people and an arable land area of approximately 38,000 ha, forms part of the larger Syr Daryo river basin in northern Tajikistan. It is well suited to the introduction of IWRM as its hydrological boundaries coincide with the current administrative boundaries for water resources management. Selected, high agricultural potential areas in the adjacent districts of Gonchi, Shariston and Istravshan will also receive support to rehabilitate irrigation and drainage infrastructure, subject to results of the assessment during the project design. The main crop varieties that will be supported through the current irrigation and water management project will be fielded crops, fruits and vegetables, - no cotton is grown in the proposed project area. Potential adverse environmental impacts would be in most cases insignificant, site specific, and temporary by nature and include the following: water and air pollution; noise; solid wastes; soil erosion; and dumping of excavated sediments and other materials from irrigation canals and from the rehabilitation of pumping stations and of water intakes; occupational hazards and safety issues during the civil works. The project will also bring valuable environmental and social benefits. Immediate benefits include: reduced water logging and water losses; improved and expansion of distribution of water for irrigation; increased agricultural yields; and poverty reduction of rural population.
B. Borrower’s Institutional Capacity for Safeguard Policies

The project will be implemented by the Fergana Valley Water Resource Management Project Management Unit (PMU) while overall responsibility for the proposed project will remain with the Agency for Land Reclamation and Irrigation (ALRI) and the Administration of Sughd Oblast. The existing PMU has previous experience in dealing with safeguards issues as it implemented several WB projects, including the first and second PAMP projects, as well as the FVWRMP completed in the area neighboring to the proposed project area. It, thus, has considerable experience and sufficient capacity in implementation of activities similar to the ones envisaged under the proposed project and ensuring adherence to the safeguards procedures in their execution. This is demonstrated through the satisfactory rating attained by the PAMP II during the most recent Implementation Support mission in May, 2016. The mission concluded the project environmental management can be considered as highly satisfactory. As requested by the Generic Environmental Management Plan (GEMP) the Project Management Unit (PMU) and local Consultant (NGO Dusti) continued conducting necessary field investigations and preparing site specific EMPs for the new participating in the project districts as well as EMP Checklists, for pumping stations to be renovated, and for construction of the new offices of Water User Associations. The main provisions of the EMPs are included in the contracts for civil works. To ensure compliance with the EMPs environmental requirements the PMU Environmental Specialist and NGO Dusti conduct regular supervision and monitoring activities. While in the field, the mission did not observe any serious environmental non-compliance. The PMU also informed WB representatives that until now there were no complaints on environmental issues, as well as no any accidents have been registered.

C. Environmental and Social Safeguards Specialists on the Team

Angela Nyawira Khaminwa (GSU03)
Arcadii Capcelea (GEN03)

D. POLICIES THAT MIGHT APPLY

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
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<tbody>
<tr>
<td>Environmental Assessment</td>
<td>Yes</td>
<td>This OP is triggered as proposed project activities (small scale earth moving, concrete works for strengthening of the embankments, repairing of water gates, cleaning up existing off-farm and on-farm irrigation canal structures and rehabilitation of water intakes; replacement of pumps as well as rehabilitation of pumping stations), might generate some environmental impacts: soil erosion; dumping of excavated sediments and other materials from irrigation and drainage canal structures and from the implemented civil works; etc. given that at this stage of project design the exact investments to be supported and their location are not known, to address potential environmental and social impacts, the borrower will update and apply the existing project framework EA document for the PAMPII - Generic Environmental Management Plan (GEMP). This document is well suited for the current project</td>
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as proposed activities are the same as within the PAMP II project, and respectively overall potential impacts, mitigation measures and monitoring activities would be the same. Furthermore, the project will be implemented in the existing irrigated areas with no environmentally sensitive areas nearby. The GEMP specifies the rules and procedures for further EIA of the activities to be financed under the project, along with the necessary mitigation, monitoring and implementing measures. It contains also the requirements and procedures for preparing EMPs, including the EMP Checklist that will be applied for small scale construction and reconstruction activities (this is an EA instrument accepted in ECA for such type of activities). Based on the GEMP for each participating district and selected irrigation schemes the client will prepare site specific EMPs which will be, per WB and national EA rules and procedures, disclosed and publicly consulted. Similar, for each pumping station to be rehabilitated the client will prepare Checklist EMPs which will disclosed and consulted and further used during the project implementation phase.

| Natural Habitats OP/BP 4.04 | TBD | No. As the proposed activities will target existing irrigation areas, none of them will have impact on protected areas or important natural habitats. This will be clarified during the project design stage. |
| Forests OP/BP 4.36 | No | No. The project activities will be implemented in the existing irrigation areas with no impact on forests foreseen. |
| Pest Management OP 4.09 | No | No. The project activities will not support purchasing and/or usage of pesticides. Secondly, based on previous experience the improved irrigation infrastructure will not lead to changes in the crops production which would require usage of more pesticides. |
| Physical Cultural Resources OP/BP 4.11 | No | No. As the proposed activities will be located in the existing irrigation areas, none of them will have an impact on physical cultural resources. |
| Indigenous Peoples OP/BP 4.10 | No | N/A |
| Involuntary Resettlement OP/BP 4.12 | No | No. The policy is not triggered as no land acquisition will be required for project activities targeting existing irrigated areas and irrigation infrastructure. Experience of the initial project would be applied to avoid any changes in land use arrangements affecting |
private farmers including cutting fruit trees which belong to them.

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<tr>
<th>Safety of Dams OP/BP 4.37</th>
<th>No</th>
<th>N/A</th>
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<tr>
<td>Projects on International Waterways OP/BP 7.50</td>
<td>Yes</td>
<td>The proposed project activities target irrigation networks which draw water from the Zarafshon river flowing through Tajikistan’s territory and onwards into the territory of Uzbekistan. Thus, the project triggers World Bank OP 7.50 (Projects on International Waterways). The proposed investments are not expected to change the volume of extraction/discharge water or quality of water in the relevant river, but rather will lead to more efficient irrigation and drainage services. The project team will seek to obtain an exemption for riparian notification from the ECA VP.</td>
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<tr>
<td>Projects in Disputed Areas OP/BP 7.60</td>
<td>No</td>
<td>N/A</td>
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E. Safeguard Preparation Plan

1. Tentative target date for preparing the PAD Stage ISDS
   15-Oct-2016

2. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the PAD-stage ISDS.

   Before Appraisal (tentatively end of September, 2016), the borrower will disclose the updated GEMP and organize public consultation with participation of major stakeholders and interested parties in Panjakent and Shahristan districts.

III. Contact point

World Bank
   Contact: Bobojon Yatimov
   Title: Sr Agricultural Spec.

Borrower/Client/Recipient
   Name: MINISTRY OF FINANCE
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Implementing Agencies
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IV. For more information contact:  
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V. Approval

<table>
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<tbody>
<tr>
<td>Task Team Leader(s):</td>
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<tr>
<td>Safeguards Advisor:</td>
</tr>
<tr>
<td>Practice Manager/Manager:</td>
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<tr>
<td>Country Director:</td>
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1 Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.