

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC460

Project Name	SOUTH KARAKALPAKSTAN WATER RESOURCES IMPROVEMENT PROJECT (P127764)
Region	EUROPE AND CENTRAL ASIA
Country	Uzbekistan
Sector(s)	Irrigation and drainage (100%)
Theme(s)	Water resource management (70%), Rural services and infrastructure (20%), Other public sector governance (10%)
Lending Instrument	Specific Investment Loan
Project ID	P127764
Borrower(s)	Ministry of Finance
Implementing Agency	PIU - MAWR
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	10-Mar-2013
Date PID Approved/ Disclosed	11-Mar-2013
Estimated Date of Appraisal Completion	15-Mar-2013
Estimated Date of Board Approval	30-May-2013
Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

Uzbekistan, an upper low-income, resource rich, double-landlocked country, is the second largest country in Central Asia by land mass, and the largest in terms of population. It accounts for nearly half of the region's population, and its economic and social development is critical both for the 29.5 million Uzbeks (half of which is rural) and the Central Asia region. Since independence in 1991, in contrast with most of the Commonwealth of Independent States (CIS) countries, Uzbekistan has adopted a gradual approach to transition and market development. This approach resulted in less painful economic and social conditions than experienced in most CIS countries and, in recent years, strong macroeconomic performance. Today, Uzbekistan has a fast-growing economy which, coupled with a large decline in the population growth rate, has led to a sharp increase of per capita GDP growth to over 8 percent since 2007. Poverty declined from 27.5 percent of the population in 2001 to 19.5 percent in 2010. However, the elasticity of poverty reduction to GDP growth remains

relatively low, among others as a result of the low productivity of agriculture which still employs one third of the population.

Sectoral and Institutional Context

Agriculture is an important component of Uzbekistan's economy. The sector accounts for about 18 percent of GDP, about 27 percent of employment, and close to 22 percent of export income. Over 85 percent – about 4.2 million hectares - of the country's cropland is irrigated, principally from the Amu Darya and Syr Darya together with their tributaries. Irrigated agriculture accounts for 35 percent of GDP and over one-third of employment.

The most important crop is cotton, grown on 1.3 million hectares, accounting for around 25 percent of foreign exchange revenues, and a significant source of tax revenue. Wheat is grown on 1.2 million hectares with the strategic objective to achieve food security and self-sufficiency. Cotton yields have remained fairly constant at 2.5 tons/ha. The government procures the bulk of the cotton and wheat harvest from producers at the state procurement price, calculated every year by subtracting official costs from export revenues. Net transfers as a result of overstated costs and direct and excise taxes are estimated at 30 percent - higher than the corporate income tax rate of 18 percent, or the maximum personal income tax band of 30 percent.

The state not only obtains large revenues from the agricultural sector, it also provides significant subsidies for I&D, financing and other inputs to rural producers. In particular, O&M costs for I&D receive significant state subsidies, only a small fraction of which is recovered from farmers. Electricity costs associated with the 20 percent of the irrigated area that depends on pumping represent about 80 percent of the budget of MAWR. Improving irrigation efficiency by one percent would result in savings of US\$10m annually.

Since independence, the government has progressively initiated reforms to improve the agricultural production environment. The organization of farming was fundamentally reformed, with land passing from co-operative usage (kolkhozes, then shirkats) to private farmers. Land reforms have led to ambiguity regarding the responsibility for O&M at the tertiary ('on-farm') level – historically done by kolkhozes and shirkats. In response to this, Water Users' Associations (WUAs) are being established for managing on-farm I&D operations and maintenance (O&M), but sustainability has often been elusive. There are now 84,000 active private farms in Uzbekistan that account for over 34.5 percent of total gross agricultural output, including 100 percent of raw cotton and 84 percent of wheat production. Cotton production was reduced from 6 mln tons of raw cotton to 3.4 mln tons and wheat production was introduced for self sufficiency. Cotton and grains are the most important crops in Uzbekistan; significant other products include fruits (apples, apricots, peaches and berries), vegetables (cucumbers, tomatoes and potatoes), milk, silk and livestock. The sown area for cotton is 1.3 million ha, grain crops 1.2 million ha, potatoes and vegetables 50,000 ha, fodder 180,000 ha, and gourds on 20,000 ha. State procurement prices for cotton and wheat have increased over the past few years, even though they are below the international parity price. Moreover, cotton production is getting less strategic nowadays and now more attention is paid to develop a horticulture sector in order to increase incomes, create more jobs and develop the rural economy.

Relationship to CAS

As reflected in the recently approved Country Partnership Strategy (CPS), the project is positioned at the core of a number of important strategic discussions in Uzbekistan. In the first place, rehabilitation of delapidated I&D infrastructure, in particular in Karakalpakstan, one of the poorest areas in Uzbekistan, is a core ingredient in the GOU's strategy to reduce poverty, increase GDP and

ensure food security, among others in response to climate change. Secondly, the GOU is slowly moving away from over-dependence on cotton and wheat, and has recently started to actively promote production of horticulture crops. The fact that the project enables production of a second non-cotton/non-wheat crop is consistent with this approach. Thirdly, the project is located at the heart of discussions on water quantity and water quality in the Aral Sea basin, and will provide an opportunity for engagement with riparian countries on efforts to increase water productivity and efficiency.

Water resource availability in Central Asia has an important seasonal, geographic and economic dimension with downstream countries highly dependent on upstream countries for essential irrigation water. Hydropower resources are concentrated in the Kyrgyz Republic and Tajikistan, while thermal energy resources are concentrated in Uzbekistan, Turkmenistan and Kazakhstan. Thus, energy-water linkages play a central role in the future of Central Asia in terms of economic development, poverty alleviation, food security, public expenditures and cooperative relations. They are inextricable from perceptions of national security, regional stability and economic growth. Managing these linkages is fraught with complex technical and political issues and sometimes diverse development objectives. Yet history and experience elsewhere have demonstrated the potential for mutual benefits from sharing both energy and water resources across borders.

Against this background, the Central Asia Energy-Water Development program (CAEWDP) aims to increase regional cooperation, encourage energy development and address water management challenges. The ultimate objective is to enable Central Asian countries to take advantage of their resource base, maximize the benefits of energy and water management at the regional scale, while respecting national priorities and safeguarding regional stability.

The proposed project is fully consistent with the CPS, GOU strategy and CAEWDP as it aims to invest in the sustainable development and management of I&D systems, in improving water resources management in the lower Amu Darya, and in helping reduce dependence on cotton and wheat. It will strengthen institutions and capacities, and improve performance of public I&D and WRM service delivery by introducing rational water management at basin, main, secondary and tertiary I&D scheme level, and by enhancing stakeholder involvement in water management.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

the PDO of SKWRIP is to sustainably improve water management and restore irrigated area in South Karakalpakstan in a financially efficient manner.

Key Results (From PCN)

Success of the project will be monitored using the following key results indicators:

- Irrigation management improved through adoption of, and adherence to agreed operating rules by farmers and staff from irrigation management authorities in the project area;
- Annual public expenditures for pumping in the project area reduced;
- Area in South Karakalpakstan provided with irrigation and drainage services (ha)
- Number of water users in South Karakalpakstan provided with improved irrigation and drainage services.
- Recovery of O&M costs in the project area as percentage of invoiced.

Relevant results indicators will be disaggregated for gender to monitor the project impact on men and women.

III. Preliminary Description

Concept Description

The project area is entirely located in South Karakalpakstan. Almost the entire drainage system of the project area (100,000 hectares) has been rehabilitated under the on-going Drainage, Irrigation and Wetland Improvement Project (DIWIP, P009127). The major change introduced by DIWIP has been the suspension of Beruni and Kyzylkum pumping stations that released saline drainage water into the Amu Darya and Lake Ayazkala. All drainage water from the project area now is now drained via the former channel of the Janadarya to the Aral Sea. The newly constructed main drain and the rehabilitated on-farm and inter-farm drainage system now flow by gravity, the areas of high water table are considerably reduced, and some of the institutional issues were addressed.

Important lessons were learned during implementation of DIWIP. These include:

1. Overall improvement of irrigation management requires addressing both “hardware” issues as well as strengthening of capacities and institutions and providing incentives to adopt innovations;
2. Local water management authorities and local governments need to be closely involved in the design and implementation of the project. This applies in particular to attempts by the project to introduce more rational management of irrigation water, and to elaborate and implement operating rules for Tuyamuyun dam.
3. While the overall environment in Uzbekistan is particularly unfavorable to a meaningful role of WCAs in irrigation management, efforts need to be undertaken to strengthen capacities through Farmer Field Schools and Demonstration Plots. These activities were highly satisfactory during DIWIP.
4. Organizational arrangements should take into account the difficulty of coordination among key government agencies, as well as between MAWR and the Government of Karakalpakstan;
5. Procurement requires pro-active implementation support from the Bank, and the procurement plan will need to contain consistent packages that will attract adequate number of bidders and competitive prices. Consistent responses by the Bank to attempts to negotiate prices after QCBS are required, including declaring misprocurement.
6. Implementation of safeguards instruments will require close monitoring and supervision to ensure full compliance.
7. Pro-active communication of key results will help MAWR, PIU and local authorities take ownership and ensure sustainability of the project achievements, and will help clarify some of the sensitive issues that the project will be involved in.
8. Competent and efficient national management staff is necessary and should be recruited before project effectiveness.

The design of the proposed project will fully incorporate the lessons learned from past experience. The project will ensure involvement of all stakeholders at national level and in Karakalpakstan. It will strengthen capacities at various levels, while project implementation will be entrusted to a competent PIU that has already demonstrated its capacity to run a large and complex operation. Adequate resources will be allocated to addressing critical “software” needs, including for canal automation, capacity strengthening and institutional support.

Following improvement of drainage, the major issues that threaten productivity and sustainability of

irrigated agriculture in the project area include the deteriorating irrigation infrastructure, the low water use efficiency and associated high costs of pumping to the public budget, and the lack of farmers' incentives to improve production and productivity. In addition, as a result of hands-on involvement of regional authorities mindful of meeting cotton and wheat quota, irrigation management has been described as "routine emergency management". More rational management of irrigation and water resources is also constrained by over-caution and by the lack of pro-activity as a result of weak water resources forecasting capacity.

Over 40 percent of the irrigation supply in the project area continues to depend on two major pump stations that abstract water from the Amu Darya. The total annual electricity costs of pumping amount to US\$ 2.39 million. The project will remove this dependence on pumping by developing a gravity off-take from Tuyamuyun reservoir and decommissioning the pumping stations, thereby improving the reliability of supply and eliminating the need to release large amounts of water into the Amu Darya to serve these stations. Studies have demonstrated that this will be possible without increasing the annual volume of water abstracted from the Amu Darya (see annex A for a water balance before and after the project). This will require construction of a new 70 km canal and rehabilitation of the Right Bank Canal (RBC). In addition, secondary canals will be rehabilitated, and deteriorated and damaged structures will be refurbished or replaced. To complement the investments in hardware, the project will also strengthen institutions and capacities, introduce more rational irrigation management at all levels that is more accountable to stakeholders to help ensure sustainability, and promote production of a second non-cotton/non-wheat crop after winter wheat.

Expected benefits include increased production from rehabilitated, previously abandoned land in downstream project areas and from vertical intensification on rehabilitated and existing land, as well as reduced costs of pumping. Production of a second non-cotton/non-wheat crop after the wheat harvest will become possible in parts of the command area.

The project contains the following components:

(i) Development of Irrigation Systems.

This component will invest in the improvement of five sections of the Right Bank Canal (to increase the conveyance capacity from 75 to 165 m³/s), construction of the Bustan Canal (concrete lined canal of 70 km length with a design duty of 75 m³/s) and rehabilitation of existing main canals including Pakhta-Arna, Keltaminor, Old Bozgap and Bogap canals. The main canal rehabilitation would eliminate the need for secondary pumping to distribution canals. In addition to earth and concrete works, there are 90 main structures (control, cross drainage and bridges) to be constructed and rehabilitated. More than 20 distribution canals (inter-farm canals) have been identified for rehabilitation. Finally, hydromet measurement stations will be installed in the project area for measuring key water management indicators.

(ii) Institutional Strengthening

The project will improve the quality of main system irrigation management through capacity strengthening as explained below, introducing performance indicators to provide incentives for improved main canal I&D management, and developing a canal automation pilot. The pilot will take advantage of a canal automation pilot that was financed by SDC in the Fergana Valley, and that provides valuable lessons.

Capacities will be strengthened at various levels. In the first place, PAN-ISA and Amu Darya Basin

Water Organisations (BVO) staff will be trained in better water resources management in the lower Amu Darya to take advantage of the opportunities that the investments will provide. Secondly, water management staff at regional and district authorities responsible for I&D management (AIS and BAIS) will be trained in principles of rational management at main and secondary scheme level, including M&E and feedback of information into improved operations. Thirdly, O&M plans will be developed, and scheduling and prioritization for repair works will be agreed. Furthermore, capacities for irrigation operation will be improved by establishing agreed operating rules, preparation of a scheme operation plan and training of staff in its use and implementation. Lastly, water management staff in AIS and BAIS will also be trained in the training of WCAs. In addition, WCAs will be trained in I&D management and O&M at tertiary level to help ensure the sustainability of the investments. They will be provided with modern tools that will be developed in close association with stakeholders. The project will pay in particular attention to the involvement of women in WCAs, and will provide tailor-made training to women.

Farmer Field Schools (FFS) will be organized to disseminate good agricultural and water management practices among farmers in the project area. FFS are implemented through the local authorities of the three districts involved in the project. The project would provide the resources and trainers, but the level of input would reduce over the implementation period with Districts authorities encouraged to provide inputs to compensate. Special attention will be paid to the promotion of a second crop after winter wheat. Three demonstration plots (DPs) will be established for each project village (nine in total). DPs will include the following issues: deep ripping (sub-soiling), land levelling / grading, crop rotation, crop diversification, field level irrigation water measurement, and using appropriate watering methods to improve in-field water distribution. It is anticipated that at least one DP in each village will focus on non-cotton/wheat crops. DPs will also be used as an opportunity to strengthen capacities of WCAs through on-the-job training. As mentioned above, women will be targeted specifically in FFS training.

(iii) Project Management and Monitoring/evaluation

The component would (i) support the operation of the PIU, and finance overall project management, as well as technical assistance in such areas as detailed design, contract administration and construction supervision, procurement, financial management, capacity strengthening and agricultural development; (ii) prepare a feasibility study and bidding documents for a follow-on investment operation, possibly including the Right Bank Main Collector Development Project; and (iii) establish a Monitoring and Evaluation (M&E) system and arrange for data collection and reporting on key performance output and impact indicators, through baseline surveys, participatory assessments and mid-term review and final evaluation.

While the impact of the project on water resources in the lower Amu Darya are negligible, the team will investigate economically feasible options to further reduce the impact of the project regarding international waterways in terms of water quantity, and to continue pursuing dialogue between riparian countries on the project.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04	x		

Forests OP/BP 4.36		x	
Pest Management OP 4.09			x
Physical Cultural Resources OP/BP 4.11			x
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37	x		
Projects on International Waterways OP/BP 7.50	x		
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	241.41	Total Bank Financing:	220.41
Total Cofinancing:		Financing Gap:	0.00
Financing Source		Amount	
BORROWER/RECIPIENT		21.00	
International Bank for Reconstruction and Development		0.00	
International Development Association (IDA)		220.41	
Total		241.41	

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