



1. Project Data

Project ID P111760	Project Name SYRDARYA WATER SUPPLY	
Country Uzbekistan	Practice Area(Lead) Water	
L/C/TF Number(s) IDA-48690	Closing Date (Original) 31-Dec-2017	Total Project Cost (USD) 73,566,926.54
Bank Approval Date 01-Mar-2011	Closing Date (Actual) 30-Jun-2019	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	88,000,000.00	0.00
Revised Commitment	80,866,237.54	0.00
Actual	73,566,926.54	0.00

Prepared by Ihsan Kaler Hurcan	Reviewed by John R. Eriksson	ICR Review Coordinator Ramachandra Jammi	Group IEGSD (Unit 4)
--	--	--	--------------------------------

2. Project Objectives and Components

a. Objectives

According to both the Financing Agreement (p.5) dated September 16, 2011, and the Project Appraisal Document (p.3) dated February 2, 2011, the project objective was “to improve the availability, quality and sustainability of public water supply services in selected districts of the Syrdarya region.”

b. Were the project objectives/key associated outcome targets revised during implementation?



No

c. Will a split evaluation be undertaken?

No

d. Components

The project consisted of four components:

A. Improvement of Water Supply Infrastructure. (*Appraisal cost: US\$95.99 million; actual cost: US\$87.32 million*)

This component included the rehabilitation and expansion of water supply systems in five districts in the Syrdarya region, i.e., Akaltyn, Bayaut, Mirzaobod, Sardoba and Khavast, consisting of (1) civil works; and (2) provision of: (a) related design and supervision services; (b) operations and maintenance equipment; (c) spare parts; (d) information systems; (e) a pilot for supervisory control and data acquisition system (SCADA); and (f) water quality laboratories.

B. Institutional Strengthening and Capacity Building. (*Appraisal cost: US\$1.76 million including physical and price contingencies; actual cost: US\$1.24 million*)

This component was to provide technical assistance to improve the capacity of the Syrdarya Region Water Management Enterprise (Syrdarya Region Suvokova), the project implementing entity, through the following: (1) the improvement of utility management and operational practices; (2) the assessment of the institutional capacity of the project implementing entity and a study for private sector participation; (3) local and international training on management and operations; (4) the provision of utility management equipment and software; (5) the development of communications strategies and public awareness campaigns; and (6) the preparation of customer satisfaction surveys.

C. Feasibility Studies for Future Investments. (*Appraisal cost: US\$0.75 million including physical and price contingencies; actual cost: US\$0.40 million*)

This component was to finance consultancy services for the preparation of feasibility studies for future priority investments in the sewerage sector in the Syrdarya region.

D. Project Management. (*Appraisal cost: US\$1.68 million including physical and price contingencies; actual cost: US\$1.58 million*)

This component was to finance consultancy services to strengthen the project management, monitoring and coordination capacity of the project coordination unit under Uzkommunkhizmat, the national communal services agency located in Tashkent, as well as its branches in the Syrdarya region.

Revised Components

The project components were not officially revised during implementation, but instead of covering the town of Birlashgan in the Mirzaobod district, the project covered three additional settlements, i.e., Yuldashabad, Bakhoriston, and Navbahor (ICR, Table 1, p.10).



e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost: The total project cost was originally estimated at US\$121.03 million including financing costs, taxes, and duties. In June 2019, the project closed with a total cost of US\$108.21 million.

Financing: At appraisal, the International Development Association (IDA) credit was estimated at US\$88.00 million (SDR57.2 million—SDR stands for Special Drawing Rights, an international type of monetary reserve used in the financing agreement). By project closing in June 2019, the project had disbursed US\$73.57 million of the IDA credit. On December 11, 2015, US\$7.01 million of the IDA credit was cancelled because of mis-procurement (ICR, p.11). All project funds were accounted for at project closing.

Borrower contribution: At appraisal, the contribution of the Government of Uzbekistan (GoU) was estimated at US\$33.03 million. At project closing, the GoU's actual contribution was US\$34.64 million.

Restructurings: There were three project restructurings:

- **First Restructuring (Level 2 – October 31, 2016):** A total of SDR32.80 million was reallocated from Goods and Unallocated categories to Civil Works category.
- **Second Restructuring (Level 2 – November 23, 2017):** The closing date was extended by 18 months from December 31, 2017 to June 30, 2019 to allow the completion of two civil works contracts that were delayed because of protracted procurement and contract registration processes (Restructuring Paper, Report No:RES26701, p.3). Additionally, SDR 1.0 million was reallocated from Goods category to Works category to cover the deficit caused by the fluctuation of the SDR/US\$ exchange rate.
- **Third Restructuring (Level 2 – October 29, 2018):** This restructuring was a part of a broader water sector portfolio action plan that was agreed by the Bank and the GoU to improve the implementation of then on-going three water and sanitation projects. In this restructuring, the financing agreement was revised (i) to allow the full allocation of IDA funds without counterpart funding to expedite contractual payments as there were delays in the availability of counterpart funding; (ii) help the GoU absorb IDA funds without extending the project closing date; and (iii) save government funds so that they could be used to finance the remaining works after project closure (ICR, p.11).

Dates: The project was approved on March 1, 2011. The Financing Agreement was signed on September 16, 2011, and the credit became effective on January 14, 2012. The lengthy process to issue the presidential resolution to sign the legal agreements and the delay in signing of the Subsidiary Agreement—one of the two effectiveness conditions—were the reasons for a long delay in the effectiveness of the project after the board approval (ICR, p.22). The Mid-Term Review was conducted in March 2015. The original closing date was December 31, 2017. In the second restructuring, the closing date was extended by 18 months, and the project closed on June 30, 2019. The reason for closing date extension has been outlined in the second restructuring entry above.

3. Relevance of Objectives



Rationale

The project objectives were highly relevant to the country context. Locally available water is scarce in Uzbekistan and the country depends 80 percent on water originating from neighboring countries. Therefore, provision of water supply services through reliable and efficient water supply systems is an important topic on the agenda of the Government of Uzbekistan. The country relies on the dilapidated infrastructure built during the Soviet Union, and half of the population did not have access to potable tap water at the start of the project with a large disparity—one to three—between rural and urban areas (ICR, p.5). The project objectives were outcome-oriented and appropriately pitched for the development status of the country. Despite the lack of institutional capacity to implement the project, it was a reasonable expectation that the project objectives could be achieved, with the support of the World Bank and the project implementation consultant to be hired under the project, because of its vital impact on the people's daily lives. The project objectives were also in line with the government's efforts to improve the water supply services in the country. The GoU's Program for the Comprehensive Development and Modernization of Water Supply and Sewerage Systems for 2017-21 aims at improving water and sanitation services delivery through continued reconstruction and rehabilitation of infrastructure, adoption of modern technologies, information systems, and automated water billing systems, and introduction of market-based mechanisms (ICR, p.12).

The project objectives were highly aligned with the Bank strategy, too, as defined in the Country Partnership Framework (CPF) for Uzbekistan for 2016-20 as adjusted by the Performance and Learning Review of the CPF for Uzbekistan (ICR, p.12). The project sought to address the development problem of increasing access to improved water supply services as defined in the objective under the Focus Area 2, Reform of Select State Institutions and Citizen Engagement (ICR, pp.12-13). Insufficient access to and quality of water supply services, as municipal services, are noted as significant challenges for development in Uzbekistan in the Bank strategy (ICR, p.13).

The Bank has been an important development partner in Uzbekistan. Uzbekistan has the second largest country program supported by the Bank in the Europe and Central Asia region after Turkey. The Bank has been involved in other water projects in the Bukhara and Samarkand regions. Therefore, given the Bank's experience in the sector and the country, the project objectives were sufficiently challenging, but overly ambitious in targeting a major institutional reorganization at the regional level while implementing investment activities to establish the infrastructure backbone for water production, transmission and distribution network.

Overall, the relevance of objectives is rated substantial, rather than high, because of the risk in achieving the objective through the establishment of a major infrastructure backbone investment while institutionally reorganizing the regional water utility, which had limited capacity.

Rating

Substantial

4. Achievement of Objectives (Efficacy)



OBJECTIVE 1

Objective

To improve the availability of public water supply services in selected districts of the Syrdarya region.

Rationale

Theory of Change for Objective 1

The investments to be financed under the first component—rehabilitation and upgrading of water supply infrastructure consisting of water production, transmission and distribution systems—were to directly lead to an increase in the capacity of the water systems. The project was to finance the provision of equipment and spare parts for operation and maintenance (O&M), utility management equipment, information systems, as well as software for the sustainability of the service delivery. Consultancy services were to be provided for technical and institutional capacity strengthening for efficient operation of the water supply network. Campaigns were to be implemented to increase the public awareness about the benefits of connecting to the water supply network through metered connections. The expected outputs were reliable water supply systems operating in the five districts, increased institutional capacity, and increased awareness. These outputs were to lead to the following outcomes: increase in water availability because of increased water production capacity and reduced share of water not generating revenue; increase in access to improved water supply in terms of quality and reliability; increase in water consumption; and efficient operation of the water network in the project area. The efficient implementation of investment activities and the communities' willingness to connect to the water network and pay for water supply service were the key assumptions for the achievement of the outputs and outcomes. Overall, the causal pathways from inputs to outcomes were valid and direct, and the outcomes achieved could be fully attributed to the project's intervention, but the project's failure to address the absence of internal plumbing in apartment buildings, which later proved to be an important barrier in increasing metered household connections, was an important shortcoming of the theory of change.

Outputs

As a result of the project activities, following outputs were achieved:

- Length of water transmission mains constructed or rehabilitated was 344 kilometers (km) against the target of 370 km.
- Length of water distribution network constructed or rehabilitated was 749 km against the target of 360 km.
- Length of water service mains constructed or rehabilitated was 150 km against the target of 420 km.
- The number of wells rehabilitated through the installation of new pumping equipment was 28 against the target of 28.
- The number of water distribution centers constructed was 44. There was no target set for this output.
- Number of piped households with water meters was 10,900. The achievement of this outcome fell short of the target of 46,683 households.
- Equipment necessary for O&M, such as excavators, freight vehicle, dump and cargo trucks, crane trucks, emergency cars, water carriers, and office equipment were purchased.
- The percentage of staff trained was 80, as planned.



- Only the data acquisition part of the SCADA system was implemented, covering the intake pumping stations at Turttom and Sirgali, the only two sources of water supply to the project area. The achievement fell short of the target set at appraisal, which was to have an operational SCADA system for monitoring and controlling the operating conditions of the water network. Furthermore, attribution could not be established because this activity was financed by the State Secretariat for Economic Affairs (SECO) of Switzerland.

The actual values of project outputs show a large deviation from target values. The project team commented that “[t]he target value numbers for networks and transmission lines were not well defined at appraisal based on feasibility study estimates,” and that the actual values achieved at project closing differed from appraisal targets because of the updated design during project implementation (Project team’s email dated November 17, 2020). This is why some project activities, such as construction of water distribution centers, did not have target values set at appraisal nor were there indicators defined for their monitoring and evaluation.

Following activities were not completed:

- Procurement of some of the critical equipment, such as nonrevenue water measurement equipment and meter test bench, was cancelled at the last supervision mission in February 2019 without any specific reason given (Aide Memoire, February 2019, p.17).
- Procurement of computers and servers for the district and branch offices of the water utility was cancelled because of lengthy delays in starting the procurement process (Aide Memoire, February 2019, p.7).

Outcomes

The project outputs resulted in the following outcomes:

- Although the target was to provide continuous water supply throughout the day, the water supply at project closing was intermittent.
- Number of people provided with access to improved water sources was 210,000. The achievement of this outcome, too, fell short of the target of 280,098.
- The water consumption of the urban population increased from a baseline of 15 liters per capita per day (lcd) to 80 lcd. The target value was 125 lcd. Since the water system was not fully commissioned at project closing, the achievement under this indicator could not be determined based on actual measurements; the achievement was measured by taking the ratio of the amount of bulk water supplied to the project area and the number of urban inhabitants with access to water via household connections or standpipes. This methodology is not well-defined and does not capture the impact of the project since the system was not fully commissioned.
- The water consumption of the rural population increased from a baseline of 15 liters per capita per day (lcd) to 60 lcd. The target value was 95 lcd. The achievement under this indicator was measured applying the questionable methodology used in the previous indicator.
- The project was expected to achieve at least 80 percent customer satisfaction rate with water supply services, a sharp increase from a baseline value of 38 percent. This indicator was to be measured through customer satisfaction surveys. But since the water system was not fully commissioned, the satisfaction rate could not be measured. (The ICR provides a satisfaction rate of 25 percent measured by a customer survey conducted in 2017, but it captures the satisfaction of the customers with water supply from unregulated private operators, not from the new public water supply network (ICR, p.27)



Therefore, the actual value of this indicator is irrelevant to measure the achievement of the project outcome).

- Although the water loss reduction measurement equipment was not procured under the project, using the data provided by the project coordination unit in May 2002, it was estimated that water loss, defined as the ratio of total hydraulic and technical losses to water production, dropped from a baseline of 40 percent to 20 percent. The target value was 14 percent.

At the third restructuring in October 2018 (see the Third Restructuring entry in section 2.e above), the financing agreement was revised to allow the full allocation of IDA funds without counterpart funding to expedite contractual payments, with the expectation that the GoU would finance the remaining works after project closing in June 2019. This expectation did not materialize, and at the time of data collection for the Implementation Completion and Results Report (ICR) in May 2020, the water system was not fully operational. The onset of the Covid-19 pandemic in early 2020 adversely affected the completion of the investment works. The project fell significantly short of achieving the target number of households connected to the water system. The low achievement was because of the absence of internal plumbing in apartment buildings and houses in villages, which was not addressed by the project's intervention.

On the other hand, the number of people provided with access to improved water sources increased by 210,000 people against a target of 280,099 people, which is a substantial achievement given that the project fell short of achieving output targets, and that the new system was not fully operational. According to the information provided by the project team, the actual number of 210,000 people consisted of 65,000 people who were connected to the water system through 10,900 piped household connections, and the rest were connected through public stand posts. The project team further informed that the number of people connected to Beshbulok pump station, which supplies water to the regional capital city of Gulistan, was included in the actual number of people with access to improved water sources, although the number of these beneficiaries was not included in the target value estimated at appraisal.

Overall, the efficacy of the achievement of the project objective to improve the availability of public water supply services is rated modest because of low achievement.

Rating
Modest

OBJECTIVE 2

Objective

To improve the quality of public water supply services in selected districts of the Syrdarya region.

Rationale

Theory of Change for Objective 2

The theory of change for the second objective follows the same logic in the theory of change for the first objective above. In addition to an increase in the number of people with access to water, the project outputs, i.e., newly built water production, transmission and distribution network, would result in an improvement in the quality of the water supply. The project inputs were to result in the construction of the water testing



laboratories—outputs. The assumption was that the water samples from the system would be regularly tested at these laboratories to ensure water quality in accordance with the Uzbekistan Drinking Water Standard.

Outputs

In addition to the outputs listed under Objective 1 above, the project financed the establishment of two water quality testing laboratories; one in Gulistan at the head office of the Syrdarya Suvokova Unitary Enterprise (SUE) and the other at the Turttom Pumping Station. The additional four water quality laboratories, one in each of the Bayaut, Khavast, Sardoba, and Akaltyn districts, were not established because of the consolidation of all district utilities under a single regional utility, i.e., SUE, in 2016 following the change in government in 2015.

According to the information provided by the project team, the water quality laboratory at the Syrdarya SUE head office in Gulistan is responsible for water quality monitoring for the whole water distribution system of the Syrdarya region. The water samples are regularly collected from the distribution system and brought to the laboratory for testing. The project team further commented that in the absence of laboratories at the district level, the water quality testing heavily depends heavily on the sustainable operation of water sampling from the districts and transportation of those samples by car to the head office. The other laboratory at Turttom Pumping Station tests the water quality at the Turttom and Sirgali water intakes.

Outcomes

According to the data provided by the Syrdarya SUE, the water quality at the intakes was 100 percent in compliance with the Uzbekistan Drinking Water Standard. However, only 80 percent of the samples at the system level, which were tested at the Syrdarya SUE head office laboratory, met the water quality standards (ICR, p.14). The target was to achieve 98 percent of regulatory water samples meeting potable water standards as defined in the national standard. While the ICR does not explicitly give reasons for the difference in water quality between intakes and the system, the following, based on characteristics of the system are possible explanations for the differences. The water system not being fully operational could be one explanation for this quality drop; when there are pressure differences in the water transmission and distribution system, which is highly likely because the system uses gravity for water supply rather than pumps, foreign materials can leak into the system from pipe joints. Additionally, there might be measurement differences between the two laboratories.

Overall, the efficacy of the achievement of the objective to improve water quality is rated modest, because of lower achievement, concerns about the sustainability of the sampling taking and testing system, and the water supply services not being fully operational.

Rating
Modest

OBJECTIVE 3

Objective

To improve the sustainability of public water supply services in selected districts of the Syrdarya region.



Rationale

Theory of Change for Objective 3

“Sustainability” was not clearly defined in the project objective. From the project design, it could be inferred as financial sustainability and operational—management and technical—sustainability. The main goal of the project was to merge five, out of nine, district level service providers in Akaltyn, Bayaut, Sardoba, Khavast and Mirzaobod under the regional Syrdarya Suvokova to establish an Inter-District Unit (IDU) with a single balance sheet and consolidating various functions and operations. Technical assistance activities under Component B, such as provision of training on management and operations, provision of utility management equipment and software, improvement of utility management and operational practices, were expected to improve the capacity of the reorganized utility resulting in knowledge accumulation and higher staff retaining ratio. Provision of operation and maintenance (O&M) equipment was to lead to an improvement in the technical capabilities of the IDU, while the installation of metered household connections, together with the establishment of information systems, would lead to higher tariff collection rates that would be sufficient to recover O&M costs. These outcomes were expected to improve the sustainability of public water supply services. The results framework included one indicator, i.e., “improved financial working ratio for Suvokova,” capturing the improvement in the financial viability of the utility. The other indicator, i.e., “improved energy efficiency of the water supply system,” partially captured the improvement in the technical sustainability of the water supply services. Overall, the result chain from project activities to outputs and outcomes were plausible, but indirect. The outcomes expected as a result of a major restructuring of the regional utility were overly ambitious, given that major investment activities to expand the water supply network were to be undertaken simultaneously as part of the project

Outputs

In addition to the outputs listed under Objectives 1 and 2 above, the project activities resulted in the following outputs:

- The project provided training to 80 percent (170 members) of the Syrdarya SUE staff, as planned, through ten training programs “on various areas of water supply service provision such as organization and management, customer service, occupational safety and environmental management, water quality, O&M, and so on” (ICR, p.19).

The following activities were financed by the GoU or other development partners:

- A billing system called “Water Control” with integrated customer database was installed. This system was prepared with the support of the Asian Development Bank and financed by the GoU.
- The data acquisition part of the SCADA system was installed covering the intake pumping stations at Turttom and Sirgali. This activity was financed by SECO.
- Under the uniform national system mandated by the GoU, an accounting system called “1C” was installed.

Outcomes

- The project activities did not result in the creation of an IDU, because following the elections in 2015, the new government adopted a country-level strategy to reorganize the water supply services sector. Under this new strategy, which was more ambitious than the project’s goal to establish an IDU, district



- and city water service utilities were merged under Suvokova Unitary Enterprises (SUEs) at the regional level. The project indirectly contributed to the establishment of SUEs through its preparatory work on the establishment of an IDU in the Syrdarya region. The Syrdarya SUE was established in January 2016, but the consolidation process was not completed at the time of the writing of the ICR.
- The tariff collection rate for households improved from 76 per cent to 90 percent, as planned.
 - The tariff collection rate for consumers other than households improved from 87 percent to 90 percent against a target of 100 percent.
 - The financial working ratio (direct operating expenses divided by cash operating revenues) of the Syrdarya SUE increased from a baseline of 0.98 to 1.20. The target was to decrease it to 0.90, which would mean operating revenues were higher than operating expenses. Although the actual value of this ratio was higher than the target value, there had been a steady improvement in the financial viability of the utility between 2017 and 2019 when the ratio decreased from 2.5 to 1.2.
 - As a result of the installation of new pumps in the wells, the energy efficiency of the water supply system, which is calculated as a ratio of power consumed in kilowatt hours (kWh) per cubic meter (m³) of water supplied to the network per year, decreased from 1.24 kWh/m³/yr to 0.65 kWh/m³/yr. The target was 0.69 kWh/m³/yr.

Initially the government aimed to keep the tariffs as low as possible and improve the financial working ratio through efficiency improvements in the operation of the water supply services, but towards the end of the project implementation period, the GoU decided to increase the tariffs as a result of “a better understanding that inadequate revenues [had] resulted in continued asset collapse and declining levels of service” (ICR, footnote 13, p.15). Therefore, in addition to the increase in the collection rate, the increase in tariffs contributed to the improvement in the financial viability of the Syrdarya SUE as reflected in the gradual decrease in the financial working ratio. Although the Syrdarya SUE could not achieve a financial working ratio of 0.9 as targeted by the project, the utility, given the gradual decrease in the ratio, could achieve financial stability if the water supply services are fully operational and if tariffs are adjusted to cover operational costs.

The results framework did not include an indicator to measure the improvement in the operational sustainability of the utility. It was assumed that with an improvement in the financial working ratio of the utility and training provided under the project, the utility would be able to retain qualified staff. However, after project closing, the institutional capacity of the utility started to weaken; some of the members of staff trained under the project had already left the utility because of other more attractive job opportunities (ICR, p.19). The evidence is insufficient to show that the utility has improved its technical capacity in implementing O&M services for technical sustainability of services.

Overall, the efficacy of the achievement of the project objective to improve the sustainability of water supply services is rated modest.

Rating
Modest

OVERALL EFFICACY



Rationale

The project was partially successful in completing the project activities and delivering a backbone of water production, transmission and distribution network, but the project fell short of achieving the targets set for improving the availability of water supply services. The water supply services are intermittent and, although the water network is newly built, only 80 percent of the water samples comply with the national tap water standards. Despite some improvements in its financial working ratio, the Syrdarya SUE has not achieved financial viability to ensure sustainable water supply services and still has institutional capacity issues. Overall, the efficacy of the achievement of the project objectives is rated modest.

Overall Efficacy Rating

Modest

Primary Reason

Low achievement

5. Efficiency

Economic Analysis

A cost-benefit analysis could not be conducted at appraisal because of difficulties in measuring the economic benefits of the project's intervention (PAD, pp.15-16). Instead, a least-cost analysis was undertaken to compare six water supply alternatives (PAD, p.16). The sum of discounted investment and O&M costs was calculated for each service option, and it was found that the least-cost option was to supply water from the Turttom and Sirgali wells to the project area by gravity and to rely entirely on Beshbulok well to supply the Gulistan area by pumping (PAD, p.68).

At the time of the writing of the ICR, a detailed cost-benefit analysis was conducted. However, as the ICR (p.53) notes, because of data weaknesses, the economic analysis was based on estimates. As explained under the efficacy section above, the water supply is intermittent and only available for several times a day for limited periods. The information regarding the likely number of beneficiaries is an approximation, i.e., 210,000 people. The Syrdarya SUE has not completed the consolidation of district water service utilities; therefore, operating costs could not be accurately estimated. Despite these weaknesses, the assumptions used in economic analysis were relevant to calculate the economic rate of return (ERR) of such a water supply project (ICR, pp.54-55). The benefits were listed as reduction in time spent for collecting water, reduction in the cost of treating (boiling) water, reduction in the cost of waterborne illnesses and reduction in the cost of water. Costs were taken as the actual project cost and annual operating costs calculated as two percent of the capital cost. More than half (57 percent) of the expected benefits were due to reduction in the amount of time spent collecting water and the remaining 40 percent due to cost reduction in the cost of accessing and treating water. The expected benefits from a reduction in health costs was estimated to constitute only two percent of total benefits. Based on these assumptions, the calculations resulted in an ERR of 9.3 percent and a net present value (NPV) of US\$35.0 million at a discount rate of 6 percent over a 30-year project lifetime, consisting of six years of construction and 24 years of operation. The ERR and the NPV increase to 15.3 per cent and US\$101.0 million, respectively, if the number of beneficiaries increases to 270,000 as estimated at appraisal.

Compared to the minimum expected ERRs of 4 to 8 percent for socio-economically important long-term infrastructure investments given in the ICR (p.17), the expected ERR of 9.3 percent of the project justifies the economic viability of the project. However, it should be noted that long-term economic benefits of the project will depend on the pending investment works not yet fully completed at project closure, mostly household



connections, full commissioning of the water supply network, and the financial and operational sustainability of the water supply services.

Operational and Administrative Efficiency

The project became effective almost one year after the Bank’s board approval because of the requirement to issue a presidential resolution in Uzbekistan to sign the legal agreements and the delay in the signing of the subsidiary agreement with the Syrdarya Suvokova, which was a condition for effectiveness. After effectiveness, the project implementation was further delayed by two years because of the time required for the mobilization of the project implementation consultant (PIC). Since only the feasibility studies were ready at appraisal—in other words, project preparation was incomplete when it was approved—the PIC to be hired under the project was to prepare the detailed designs and bidding documents, without which the project implementation could not start (ICR, p.21). The project coordination unit in Tashkent had insufficient capacity, which resulted in “delayed decision-making, weak monitoring, and coordination” (ICR, p.22). The project implementing entity, i.e., Syrdarya SUE, was supported by technical assistance to improve its project implementation capacity, but the utility could not retain the trained members of staff, nor was able to attract skilled staff (ICR, p.22). As a result, there were delays in project implementation, the contract management was weak, the updating of project-related information was not regular, and the utility was not ready to deliver water supply services. Although the project design allowed the project implementing entity to do procurement directly with the assistance of the project coordination unit, the fiduciary aspects of the project were centrally administered causing delays in the implementation of works. There were also issues with the availability of counterpart funds; these funds were not released according to the project financing arrangements. This led to the Bank’s decision to allocate 100 percent of IDA funds for all categories, without counterpart financing, with the expectation that counterpart funds would be used to finance the remaining works after project closure. The project closed while some works were still incomplete, especially household connections. These activities were not completed one year after project closure.

Overall, despite an acceptable ERR compared to sector average, the efficiency of the project in achieving the project objective is rated modest because of the significant shortcomings in operational and administrative efficiency of the project and concerns about the long-term sustainability of the water supply network.

Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	9.30	83.64 <input type="checkbox"/> Not Applicable



* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The project objectives are substantially relevant to the country context and aligned with the Bank strategy. The efficacy of the achievement of project objectives is rated modest because the project substantially fell short of achieving the outcomes expected from its intervention; even one year after the project's closure, the water supply network was not fully commissioned and the water supply was intermittent. The project's efficiency is also rated modest because of significant shortcomings in the operational administrative efficiency of the project, despite an acceptable rate of economic return. Overall, the outcome of the project is rated moderately unsatisfactory, even though it established an infrastructure backbone for water supply services in an area where there was no such network previously.

a. Outcome Rating

Moderately Unsatisfactory

7. Risk to Development Outcome

Insufficient improvement in the financial situation and institutional capacity of the water utility, i.e., Syrdarya Suvokova Unitary Enterprise (SUE), is a substantial risk for the sustainability of water supply services in the project area. At the time of the writing of the ICR in May 2020, the consolidation of the Syrdarya SUE was still ongoing. Despite an improvement in the utility's financial working ratio, the revenues of the utility are still lower than its operating costs. The utility is finding it difficult to retain skilled personnel to manage and operate water supply services. The utility has yet to establish a customer-responsive service. Weak financial situation and institutional capacity can lead to insufficient operation and maintenance of the system and a rapid deterioration of the water supply network.

Intermittent water supply poses a significant risk for the long-term technical sustainability of the water supply network. The project was designed to create capacity to produce sufficient water to continuously supply the project areas. However, the utility prefers to supply water intermittently, arguing that since the water supply relies on gravity (rather than pressure), customers closer to the supply towers would consume much more water leaving less water for customers further away from the towers. The utility also argues that there would be issues in billing and collection from customers who would consume more due to their proximity to the water towers if water were supplied continuously (ICR, p.53). It is not clear whether these arguments are valid or not, but if the utility continues with intermittent supply of water, this will likely increase pipe bursts resulting in higher maintenance costs, worsen the water quality because of inverse leakage, and shorten the lifespan of the water supply network.

Without additional investments in the water supply network, including household connections, the economic benefits of the project may not fully materialize. The project was successful in establishing the infrastructure backbone for water supply services in Syrdarya region where such network did not exist previously. However, the project closed without completing all investments. The utility's priority was expanding the water supply network, rather than establishing household connections, which required renovating apartment building and village houses to install internal plumbing. Currently, a majority of the



beneficiaries have access to water through public stand posts. Investments need to continue to expand the water supply network, including household connections, to increase the economic benefits of the water supply services to beneficiaries. The water supply network investments should also be supported by sewage network investments.

8. Assessment of Bank Performance

a. Quality-at-Entry

The strategic relevance of the project was substantial, and its approach was straightforward; the main expected outcome of the project was to bring water supply services to a part of the Syrdarya region through the construction of a network for water production, transmission and distribution where such infrastructure did not exist and rehabilitate a small portion of the existing system to improve service delivery quality. The project's theory of change supported the achievement of these outcomes, but the absence of internal plumbing in apartment buildings and houses in villages was overlooked at appraisal. The project's technical preparation was incomplete at the start of implementation; only the feasibility studies were available. The project implementation consultant (PIC) to be hired under the project was to prepare the detailed designs and bidding documents. The delay in hiring the PIC by two years had a cascading effect on the start of project activities. The project implementing unit, i.e., Syrdarya Suvokova (later Syrdarya Suvokova Unitary Enterprise-SUE), did not have the capacity to implement the project, which was identified at appraisal. This was to be mitigated through technical assistance support to the Syrdarya SUE in project implementation and also support from the project coordination unit (PCU) within the Uzkomkhizmat (National Communal Services Agency) located in Tashkent, which was deemed to have sufficient experience in project implementation according to the Bank procedures. These mitigation measures were overly optimistic; both the Syrdarya SUE and PCU had qualified staff shortage as a result of which the project implementation was almost fully delegated to the PIC. The impact of the heavily centralized financial management system and the restrictions on foreign currencies on project implementation was not sufficiently assessed at appraisal. Releasing of counterpart funds was mostly delayed, and when they were released, converting them to foreign currency to process payments to contractors took substantial time. Economic aspects of the project could not be adequately assessed because of lack of reliable data; however, an assessment was conducted to choose the least-cost investment option. The monitoring and evaluation (M&E) arrangements were adequate to capture the achievement of the improvements in the availability and quality of water supply, but there were shortcomings in the M&E design in capturing the sustainability of service delivery and the improvement in the operational performance of the utility because of the institutional reorganization of the regional and district utilities.

Quality-at-Entry Rating
Moderately Unsatisfactory

b. Quality of supervision



There were only three task team leader (TTL) turnovers during eight years of project implementation, positively contributing to the continuity in the project team. Supervision missions were held on average twice a year. The Implementation Status Results Reports prepared after every mission were detailed and candidly reported project performance and key issues. The project team was predominantly occupied with overcoming project implementation issues stemming from delays in procurement. An assessment of the water supply and Syrdarya SUE and the project coordination unit for procurement, financial management, contract management and safeguards policies, but this assessment did not lead to an institutional capacity improvement because of lack of a designated specialist in the implementing agencies and failure of these agencies to retain trained personnel.

There were some significant shortcomings in the Bank's supervision. First, the monitoring of implementation of safeguards policies did not start until the second half of 2016. This resulted in non-compliance with the Involuntary Resettlement policy, which lasted through to project closure. Second, project restructurings were restricted to reallocation of funds among expenditure categories, rather than making the project "more aligned with the country priorities," such as revising the project's goal to the establishment of Syrdarya SUE rather than the originally planned Inter-District Unit, or to reduce the ambition of the project to align the expected outputs and outcomes from the project with what could be realistically achieved (ICR, p.32). But it should be noted that major project restructurings were not practical since such amendments to the financing agreement required the issuance of presidential resolutions, which required long processing times. Third, the decision to close the project before the completion of all project activities, with the expectation that pending investments would be completed by the implementing agency using counterpart funds, resulted in the Bank's losing its oversight over project implementation. Even almost one year after the closure of the project, some investment activities were still on-going.

Quality of Supervision Rating

Moderately Unsatisfactory

Overall Bank Performance Rating

Moderately Unsatisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The first and second objectives to improve the availability and quality, respectively, of water supply services were clearly specified, but the definition of "sustainability" in the third objective—to improve the sustainability of water supply services—was not clear. From the project design, this was inferred as financial and operational sustainability. The project's theory of change for the first two objectives was simple and the links in the result chain were direct, but the theory of change did not address the internal plumbing issue, which was critical to increase the number of household connections. The links between project activities and the expected outcomes to improve the sustainability of water supply services were plausible, but not direct. The expected outcomes through a major restructuring of the regional utility were overly ambitious while implementing major infrastructure investment activities. The indicators, such as "number of people provided with access to improved water," "percentage of regulatory water samples meeting potable water standards," and "increased water consumption of the served population," were



sufficient to capture the achievement of the first two objectives. These indicators were specific, measurable, relevant and time-bound. However, due to the weakness of the theory of change in addressing the internal plumbing issue, the indicators were partially achievable. The project's results framework was weak in capturing the achievement of the improvement in the sustainability of water supply services. There was only one indicator measuring the improvement in the financial working ratio of the utility; the expected outcomes from the activities in the technical assistance component related to the reorganization and the institutional strengthening of the utility were not captured. Similarly, the intermediate results indicators related to the investment activities were adequate to capture the project's outputs toward achieving objective-level outcomes, whereas the results framework lacked intermediate results indicators that adequately captured the outputs expected from the technical assistance activities. The weakness in the institutional capacity of the utility in collecting reliable data for the measurement of the indicators was identified at appraisal, and this weakness was to be overcome through the installation of a management information system (MIS) and supervisory control and data acquisition (SCADA) system. Additionally, customer satisfaction surveys were to be conducted to measure the satisfaction of the customers with the water supply services through the newly built water supply network. These surveys were to provide adequate information about the impact of the project's intervention on the beneficiaries.

b. M&E Implementation

The Syrdarya Suvokova Unitary Enterprise (SUE), with the help of the project implementation consultant, collected data for the results framework, and the Project Coordination Unit (PCU) in Tashkent reported these findings to the Bank. However, the MIS and SCADA could not be installed as planned. Only a small part of both systems was installed under financing from other donors (ICR, p.27). Therefore, data to measure the achievement of the outcome level indicators were either not available or unreliable. Most of the indicators were not systematically measured (ICR, p.23). The weakness in the results framework related to the measurement of the outcome of the technical assistance in institutional capacity building was not corrected during implementation. Four customer satisfaction surveys were conducted between 2013 and 2017. These surveys "primarily assessed satisfaction levels of the customers on water access, pressure, and quality, and their willingness to pay higher services," but the survey was not repeated when the Syrdarya SUE partially started water supply services from the new system constructed under the project (ICR, p.27). Therefore, the satisfaction level of the customers with the new water supply services is not known. The M&E functions and processes are not likely to improve or be sustained unless the MIS and SCADA systems are fully installed, and the Syrdarya SUE attains institutional capacity to operate them.

c. M&E Utilization

The M&E findings were mostly not available nor reliable to support the achievement of the project outcomes. The data used in the ICR were not actual measurements, but estimates based on information provided by the project implementation consultant. There was no shift in project implementation direction attributable to the M&E activities. The restructurings were mostly related to the reallocation of funds between expenditure categories. On the other hand, the M&E estimates were used to provide evidence of achievement of outcomes; they were not restricted to only providing evidence of application of inputs or achievement of outputs. The M&E findings from this project were used in the preparation of the Water



Services and Institutional Support Project (P162263) that was approved by the Bank's board in March 2020.

Overall, the quality of M&E is rated modest because of significant weaknesses in the M&E design and implementation making it difficult to assess the achievement of the stated objectives and test the links in the results chain, and in the utilization of the M&E system despite its impact on the subsequent Bank-financed project.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

The project was classified as Category B under Environmental Assessment (OP/BP 4.01) and triggered Involuntary Settlement (OP/BP 4.12).

Environmental Assessment (OP/BP 4.01): An Environmental Assessment (EA) satisfactory to the Bank requirements was undertaken at appraisal and an Environmental Management Plan (EMP) was prepared by Uzkomkhizmat located in Tashkent. The environmental impact of the project was expected at the construction stage consisting of assessments of noise and dust to be of limited duration and site-bound. There were occasional shortcomings in the implementation of the safeguard policy, such as “workers not wearing personal protection equipment, gaps in documentation and record-keeping, low priority given to environmental management protocols and occupational health and safety measures, and varying degrees of implementing corrective actions and recommendations” (ICR, p.27). The project implementing entity, Syrdarya SUE, did not have an environmental safeguards specialist; therefore, the project implementation consultant hired under the project was fully responsible for the implementation and enforcement of the environmental safeguards policy. The Bank's project team provided guidance and support in the implementation of safeguard policies, but because of the absence of a dedicated environment specialist at Syrdarya SUE, the project failed to achieve any capacity-building outcome.

Involuntary Resettlement (OP/BP 4.12): Because of the construction, rehabilitation and replacement of water supply infrastructure, some permanent or temporary land acquisition was expected; hence, this safeguard policy was triggered at appraisal. The Government of Uzbekistan prepared a Resettlement Policy Framework (RPF) to mitigate any negative social impact on individuals due to involuntary resettlement. However, in the second half of 2016 when the Bank's project team started monitoring the safeguards policies, it was found that project implementing agencies were not aware of the RPF. There were some improvements in the awareness of implementing agencies on social issues towards mid-2017, but the social due diligence report was not available through to project closure and the project implementation consultant's reports did not provide information about land acquisitions (ICR, pp.28-29). The land acquisition requirement was only about 0.36 hectares for the construction of water distribution centers. In order to minimize the social impact of the project, the Syrdarya SUE changed the right-of-way for pipelines, coordinated the construction works with farming activity and harvesting season, and reduced the farmers'



annual quota to be submitted to the government to compensate for the loss of agricultural land. A grievance mechanism was in place, but because of the absence of a dedicated specialist at Syrdarya SUE, there was no systematic analysis or follow-up of the grievances filed by persons affected by the project (ICR, p.29).

b. Fiduciary Compliance

Financial Management

The project coordination unit (PCU) did not have the capacity to implement financial management in accordance with the Bank's procedures. Sufficient financial management capacity could not be built during project implementation because of high staff turnover. There were delays in the submission of interim financial reports and audited project and entity financial statements. Expenditures incurred under the project were documented with delay. Delays in releasing counterpart funds continued through to project closure. The Syrdarya SUE could not convert government funds to foreign currency and make payments to contractors according to contractual obligations because of foreign currency restrictions existed until September 2017. Despite a gradual and steady improvement in the financial situation of the utility, the Syrdarya SUE's financial working ratio—operating expenses divided by cash operating revenues—was 1.2, higher than the target value of 0.9. Since the Syrdarya SUE did not incur any new debt during project implementation, the debt service coverage ratio set at 1.2 at appraisal for new borrowing was not applicable (ICR, pp.61-62). The project team confirmed that all project funds were accounted for at project closure.

Procurement

The project was faced with procurement issues from the start of project implementation. Despite the project design that mandated the regional utility to be in charge of procurement, all procurement decisions were centralized according to the government regulation, and the PCU was responsible for procurement. Lack of sufficient capacity at the PCU resulted in a very long delay—two years—in hiring of the project implementation consultant (PIC). Since the PIC was to prepare detailed designs of the investment projects and bidding documents, the delay in hiring the PIC had a cascading effect on procurement for project activities. The Bank's project team supported the PIC in the preparation of bidding documents in accordance with the Bank's procurement guidelines. The Bank declared mis-procurement on one of the contracts, because the PCU had signed the contract without receiving no-objection from the Bank, which was against the Bank's procurement guidelines. The training on procurement provided by the Bank to the government staff and contractors between March and October 2016, and the project team's close monitoring of large contract procurement had a positive impact on project implementation; by early 2017, most of the contracts had been awarded.

c. Unintended impacts (Positive or Negative)

None.



d. Other
 None.

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Unsatisfactory	Moderately Unsatisfactory	
Bank Performance	Moderately Unsatisfactory	Moderately Unsatisfactory	
Quality of M&E	Modest	Modest	
Quality of ICR	---	High	

12. Lessons

This review has drawn three lessons incorporating material from the lessons listed on page 33 of the ICR.

Incomplete project preparation at appraisal can result in significant implementation delays and less focus on capacity building activities. At appraisal, only the feasibility studies were ready and detailed design and bidding documents were to be prepared by the project implementation consultant (PIC) to be hired under the project. The procurement of the PIC took for two years, which had a cascading effect on the procurement of contracts for investment activities. The delay in procurement, hence in investment activities, resulted in spending more effort to kick-start these activities rather than focusing on institutional capacity building concurrently. The project coordination unit and the Syrdarya SUE, the public utility, lacked institutional capacity in project implementation, financial management and safeguards policy. These responsibilities were mostly delegated to the project implementation consultant. Hence, the project was not successful in strengthening institutional capacity.

Closing a project with the expectation that pending activities would be financed by saved counterpart funding can critically affect the achievement of project objectives and also weaken the Bank’s oversight over the completion of pending activities. Following the extension of the project closing date by 18 months, the Bank management decided not to extend the project closing date again although some investment activities were still ongoing. The decision was part of a water supply and sanitation (WSS) sector portfolio-wide action plan—the Bank had three WSS projects in implementation and a fourth one was under preparation—and aimed at closing projects where the government was expected to complete the pending activities using its own funds. As a result, the Bank’s oversight over the project activities weakened, and the government prioritized the expansion of the water supply network rather than connecting households to the system through metered piped connections. At the time of the writing of the Implementation Completion and Results



Report by almost one year after project closure, some transmission and distribution investment activities were still pending, and the project had failed to achieve most of the outcome level targets.

Absence of internal plumbing in household units in a basically urban water supply project can adversely impact the achievement of project outcomes and economic benefits despite the completion of the backbone of the water production, transmission and distribution network. The project's theory of change did not address the absence of internal plumbing in apartment buildings and houses in villages. The beneficiaries in these households could have access to water from public stand posts, which is not convenient. Despite the achievement of a significant infrastructure backbone for water supply services in the Syrdarya region where such network did not exist before, the project significantly fell short of achieving the target number of metered household connections because of the absence of internal plumbing.

13. Assessment Recommended?

Yes

Please Explain

An assessment of this project is recommended in conjunction with other water supply and sanitation (WSS) services projects in Uzbekistan to evaluate the impact of the Bank's interventions on the improvement of WSS sector in the country.

14. Comments on Quality of ICR

The ICR provides a complete critique of the project. The narrative is tightly written, highly evaluative, and candid in explaining the shortcomings of the project during implementation. The tables were very useful in supporting the narrative and summarizing the salient points of the analysis. Despite the challenges with the availability and reliability of data, the ICR sufficiently presents a complete and robust evidence base, including annexes, to support the achievement, or non-achievement, of the project objectives. There is a well-articulated theory of change informing the reader as to how the efficacy ratings have been reached. The report is focused on how activities should have informed outcomes and what the shortcomings were in achieving the project objectives. The ICR is internally consistent; there is a logical linking and integration of the various parts of the report and the results are mutually reinforcing. The report is highly consistent with the Bank guidance. The sections on safeguards, financial management, and procurement are detailed enough to allow the reader to have a clear understanding of these aspects of the project. The lessons are well articulated, specific, and based on the experience gained during project's implementation. The analysis is high quality and supports the ratings, except the Efficiency rating. The discussion in the Efficiency section supports a modest rating rather than a substantial one, but this does not have a material impact on the overall analysis or the Outcome rating. Despite being substantially longer (33 pages) than recommended in the Bank guidance (15 or 20 pages) and having some minor typos, the ICR, overall, meets the criteria for a quality rating of high.



a. Quality of ICR Rating
High