Validation Report

Reference Number: PVR–259
Project Number: 35496
Loan Number: 1903
December 2013

Uzbekistan: Western Uzbekistan Rural Water Supply Project

Independent Evaluation Department

Asian Development Bank

ABBREVIATIONS

ADB – Asian Development Bank
EIRR – economic internal rate of return
PCR – project completion report
PIU – project implementation unit
PMU – project management unit

NOTE

In this report, "$" refers to US dollars.

Key Words

adb, asian development bank, community development, infrastructure, multisector, rural water supply, slum upgrading, urban development, urbanization, uzbekistan

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PROJECT BASIC DATA

Project Number:	35496	**PCR Circulation Date:**	Dec 2011	
Loan Number:	1903	**PCR Validation Date:**	Dec 2013	
Project Name:	**Western Uzbekistan Rural Water Supply Project**			
Country:	Uzbekistan		**Approved** ($ million)	**Actual** ($ million)
Sector:	Water and Other Municipal Infrastructure and Services	**Total Project Costs:**	65.0	48.2
ADB Financing: ($ million)	**ADF:** 0.0	**Loan:**	38.0	29.4
		Borrower:	27.0	18.8
	OCR: 38.0	**Beneficiaries:**	0.0	0.0
		Others:	0.0	0.0
Cofinancier:		**Total Cofinancing:**	0.0	0.0
Approval Date:	2 May 2002	**Effectiveness Date:**	9 Aug 2002	9 Jun 2003
Signing Date:	11 May 2002	**Closing Date:**	31 Mar 2006	Dec 2011
Project Officers:		**Location:**	**From**	**To**
	A. Leung	ADB headquarters	Sep 2002	Jan 2004
	P. Wallum	ADB headquarters	Feb 2004	Oct 2005
	P. Wallum	Uzbekistan Resident Mission	Nov 2005	Dec 2005
	D. Walton	Uzbekistan Resident Mission	Jan 2006	Mar 2006
	R. Nadyrshin	Uzbekistan Resident Mission	Apr 2006	Dec 2011
Validator:	R. Gilbert, Consultant	**Peer Reviewer:**	J. Foerster, Evaluation Specialist, IED1	
Quality Reviewer:	C. Kim, Principal Evaluation Specialist, IED2	**Director:**	W. Kolkma, IED1	

ADB = Asian Development Bank; ADF = Asian Development Fund; IED1 = Independent Evaluation Department, Division 1; IED2 = Independent Evaluation Department, Division 2; OCR = ordinary capital resources; PCR = project completion report.

I. PROJECT DESCRIPTION

A. Rationale

1. The Republic of Karakalpakstan and the Khorezm Province—suffering since 2000 from the effects of the worst drought of the century that includes the disappearing Aral Sea—are located in what is already the most arid part of Uzbekistan. Water has increasingly become scarce and poor in quality, resulting in loss of irrigation-bound crops, and leaving rural communities without access to safe drinking water and exposed to waterborne diseases. The acute water shortage needed to be addressed urgently. Within the government's medium- to long-term water resource management programs, this project was conceived to provide reliable water supply, alleviate human suffering from the drought, and strengthen institutions to sustainably manage water resources. The Asian Development Bank (ADB) was to play a prominent role in international assistance provided primarily by the World Bank, the United States, and the European Union through their own projects to address issues such as trans-boundary water use, better subregional water resource management, and encourage changes in agricultural practices to make them less irrigation dependent.

B. Expected Impact

2. The goal of the project was to improve the living and health conditions of the people, particularly the poor in the rural communities of Karakalpakstan and Khorezm.[1] This was to be achieved by ensuring local access to safe and adequate water supply and reducing the incidence of waterborne diseases, such as typhoid, diarrhea, and hepatitis A. The project expected the poor, comprising 60% of the local population of the two areas, to benefit.

C. Objectives or Expected Outcome

3. According to the project framework at appraisal, the objectives of the project were twofold: (i) to mitigate the effects of the ongoing drought by providing safe and easily accessible water supply, minimizing water wastage, and improving health conditions through better hygiene practices; and (ii) to strengthen the management of a sustainable potable water supply.[2]

D. Components and Outputs

4. At appraisal, the project had four components: (i) water supply (appraisal cost: $46.1 million) including works and equipment for bulk water supply to *rayons* and water supply within them, together with operational equipment, design, and construction supervision; (ii) water conservation and sanitation (appraisal cost—$0.6 million) including equipment for water conservation measures and works for sanitation; (iii) capacity building ($1.3 million) including project management and supervision, institutional strengthening, and public awareness campaigns; and (iv) project management ($1.5 million).

E. Provision of Inputs

5. According to the appraisal, financing included an ADB loan of $38.0 million and government counterpart financing of $27.0 million (of which $9.0 million was exemption from taxes and duties). Actual inputs were less since final costs at $46.7 million were substantially lower than the appraisal's $65.0 million. Thus, 78% of the expected ADB loan and 64% of the expected government counterpart funding were utilized. Actual component costs were (i) water supply ($41.7 million); (ii) water conservation and sanitation ($0.4 million); (iii) capacity building ($0.6 million); and (iv) project management ($1.9 million). Against an appraisal expectation of 32 person-months of international and 222 person-months of national consulting services, the project required more than twice those inputs, with 70 person-months of international and 780 person-months of national consulting services. The project completion report (PCR) did not explain why the actual inputs were more than twice those planned. The project management contract alone accounted for 63% of all actual international and 72% of all actual national consulting services.

F. Implementation Arrangements

6. A central project management unit (PMU) was to be established within the then Ministry of Macroeconomics and Statistics, later the Ministry of Economy. The PMU was responsible for the planning, organization, implementation, and monitoring and evaluation of the project as a whole. The PMU also oversaw project implementation units (PIUs)—set up under local

[1] ADB. 2002. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of Uzbekistan for the Western Uzbekistan Rural Water Supply Project*. Manila.

[2] ADB. 2011. *Completion Report: Western Uzbekistan Water Supply Project in Uzbekistan.* Manila. The PCR reports (p. i) that the appraisal mission was waived according to a decision of the management review meeting.

governments in Karakalpakstan and Khorezm—in charge of the selection, design, planning, implementation, and financial management of their subprojects. A project steering committee of central and local government representatives chaired by the deputy minister of the responsible ministry, coordinated water supply and drought relief activities of this project and other international assistance in the project area.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

7. Although the PCR rating of *highly relevant* might apply to the project objective, it would overstate the relevance of a project design with the shortcomings mentioned below. For this reason, the validation's overall rating is downgraded to *relevant.*

8. The project objective—mitigating the effects of drought—remains consistent with government policy, recently re-stated at the United Nations General Assembly to stimulate joint efforts to facilitate mutually beneficial cooperation over natural disasters, including drought.[3] Providing good water supply to the rural population is part of Uzbekistan's National Water Supply and Wastewater System Development and Modernization Plan, 2009–2020, which has targeted 85% coverage in these areas. This target is cited explicitly in ADB's own country partnership strategy for Uzbekistan for 2012–2016.[4] Providing safe water in rural areas is part of Uzbekistan's commitment to the achievement of the Millennium Development Goals, toward which the country has been making good progress according to the United Nations.[5]

9. The project design was also relevant in principle for supporting actions such as greater water provision, improving management, and increasing awareness of hygiene that could directly lead to the objective of consolidating water supply services in the project areas and improving health conditions of the people living there. It was less relevant however because the project design was weak, lacking sound assessment of water resource management and practice. In addition, the capacity building component did not address water resource management, which is especially challenging in this context.

B. Effectiveness in Achieving Project Outcome

10. The validation rates the effectiveness in achieving the project outcome *less than effective,* same as the PCR. The validation's rating arises from an examination of the effectiveness of each of the four elements of the project objective—mitigating the effects of drought, minimizing water wastage, improving health conditions, and strengthening water supply management.

11. The validation assesses mitigating the ongoing effects of drought through water supply less than effective. According to the PCR, water supply improvements through the project benefited more than 701,637 people, some 35% of the entire rural populations of both Karakalpakstan and Khorezm, but only 181,994 of these were directly served by a water distribution network. Of the 381,637 people served by the project in Karakalpakstan—more than half of the project's total—only 30,154 people were served by a water distribution network, less than 8% of the republic's beneficiaries. Thus, 92% of Karakalpalstan's beneficiaries would be

[3] Prevention Web. http://www.preventionweb.net/english/policies/v.php?id=26338&cid=187
[4] ADB. 2012. *Country Partnership Strategy: Uzbekistan, 2012–2016.* Manila.
[5] United Nations Department of Economic and Social Affairs. 2011. *Assessing Development Strategies to Achieve the Millennium Development Goals in the Republic of Uzbekistan.* New York.

served by the 4,321 yard connections or communal standpipes reported by the PCR. An average of 81 people per connection would still spend considerable time fetching water, the relief from which was celebrated by the PCR. Beneficiaries were much better served in Khorezm—there were only 5 people for each of these connections and 47% of all beneficiaries were served through a distribution network. Power cuts and performance problems with long supply lines meant that actual supply for both areas was only for two 2-hour periods per day, short of the appraisal's intent of three 2–hour periods per day. Scarcity of raw water itself was likely to have been a cause too, as the PCR implied. While the PCR reported that the quality of the water was monitored "stringently" and that the water quality monitoring system in place was "satisfactory," it provided no information on the water quality itself. Despite these shortcomings, which hopefully will be temporary, the project did install the major water supply infrastructure intended, including four trunk lines (two of 240 kilometers and two of 120 kilometers), bulk pumping stations, deep boreholes, water distribution centers, and treatment plants.

12. The validation assesses minimizing water wastage effective. According to the PCR, nonrevenue water fell significantly from a range of 45%–60% before the project, to a range of 23%–27% after the project. The project installed the target numbers of bulk and consumer water meters but the PCR provided few details about how these are used to monitor water consumption and charge consumers. As far as the project is concerned, the PCR's reporting of water tariffs and cost recovery was inconclusive because the data refer to the entire jurisdictions of Karakalpakstan and Khorezm, including their urban areas, and do not refer to the project's rural areas. Moreover, baseline data for Khorezm is missing. For a region where 95% of raw water goes to irrigation for agriculture, it is surprising that there is little reference to water wastage in that competing subsector, which could directly affect the water resources available for human consumption.

13. The validation assesses improving health conditions ineffective. No reports comparing health conditions after the project with health conditions prior to it are available, as acknowledged by the PCR. The project's public awareness and hygiene information campaigns reached only 181,000 people instead of the 700,000 targeted. There were fewer pit latrines installed in schools—just 24 of the 50 targeted. Furthermore, the project's intended demonstration pit latrines in selected village centers were not installed.

14. The validation assesses achieving the final element of strengthening water supply management less than effective. Project training gave insufficient attention to water resource management. The PCR did not report results of stronger management in an area that is critical for drought mitigation for the population living in a critical arid region. Against a target of 300, a training program for 986 local water supply operational staff covered water supply management, asset management, and public awareness campaigns. But the results of this training upon water supply management itself, or even on whether the trainees continued to work in the sector were not reviewed by the PCR. Another subcomponent upgrading the local utilities' computerized accounting systems was canceled as it had already been delivered as part of an ongoing World Bank project. Cost-recovery results, reported for the entire region and not just rural project areas as already noted were poor. In both Karakalpakstan and Khorezm, current revenues as a share of current expenses in 2011 were lower than they had been in earlier years, reaching only 27.7% in the case of Karakalpakstan. There was no discussion of tariffs as part of water management.

C. Efficiency of Resource Use in Achieving Outcome and Outputs

15. The PCR rated the project *efficient* even though a planned 3-year-and-10-month operation took 9 years and 7 months from loan approval to closing.[6] This validation also rates the project *efficient,* considering that the overall economic internal rate of return (EIRR) of the project's water component is 14.2%, which is above the cut-off rate but below the 19.7% EIRR at appraisal. The appraisal and completion data sets are not directly comparable, however, as each refers to a different geographic area. Even though the EIRR at completion was higher than the estimated 12% opportunity cost of capital, the EIRR was lower than it would have been without the project delays. The delays were principally caused by (i) a 9-month delay in loan effectiveness; (ii) protracted government approvals of feasibility studies and consultant contracts; (iii) slow separate approvals of these contracts by the Ministry of Foreign Economic Relations, Investment and Trade; (iv) high turnover and poor capacity of PMU and PIU staff; and (v) construction delays with some components. The loan closing date was initially expected to be 31 March 2006, but after various extensions, stretched to 31 December 2011. In these analyses, the principal benefits to households were increased water consumption (for which households were deemed willing to pay) and the considerable time saved in collecting water (affecting only a minority, however). The reduction of nonrevenue water already noted was a positive contribution to efficiency.

D. Preliminary Assessment of Sustainability

16. The PCR rated the project *likely* sustainable. This validation also rates the project *likely* sustainable because at the level of the water companies' jurisdictions as a whole, the evidence showed three and fourfold increases in public water tariffs since 2003 although these increases may adversely affect actual collections in the short run. The PCR reports that the Khorezm utility's collection efficiency rose to 100% in 2008–2009, but fell back to 83% in 2010–2011. As anticipated since the appraisal, full cost recovery to pay for these utilities' operations and maintenance is still 10 years away. However, the local governments' past contributions and continued willingness to subsidize water supply bode well for sustainability. On the other hand, an important sustainability factor not addressed openly by the report and recommendation of the President or the PCR is how climate change might adversely affect the availability of raw water to feed project systems in Uzbekistan's most arid region. The PCR hints that water availability has become a problem by drawing an (obvious) lesson from the project that "uninterrupted power supply and assured raw water availability are critical for sustainability."

E. Impact

17. The PCR rated the project impact *significant*, a rating that this validation downgrades to *moderate*. The project did have an impact upon improving the living conditions of people through service improvements, but did not demonstrate impact upon their health. The PCR itself recognized that no conclusion can be drawn about the reduction of waterborne diseases, the health impact intended by the project, for lack of evidence of a key outcome that was not monitored by the project. Additionally, water's contribution to better living conditions was limited by being available for only 4 hours per day and by uncertainty about its safety in the absence of water quality monitoring and reporting.

[6] Footnote 5, issued on 28 December 2011, reported that the loan was still not closed.

III. OTHER PERFORMANCE ASSESSMENTS

A. Performance of the Borrower and Executing Agency

18. The validation supports the PCR's assessment of the performance of the borrower as *less than satisfactory.* Slow borrower approval of project feasibility studies and long drawn-out borrower processing of loan effectiveness conditions delayed start-up and significantly overextended implementation. The borrower did not submit annual environmental reports to ADB. Executing agencies, unable to keep their PIUs continually and adequately staffed, could not give the attention that important project activities needed. The implementation of the project's water conservation and sanitation component, especially pit latrines in schools and hygiene awareness campaigns, suffered because of this.

B. Performance of the Asian Development Bank

19. The validation rates the performance of ADB *satisfactory*, same as the PCR. ADB's preparation came up with an operation that responded to well-documented priority needs. The lack of an appraisal mission, however, may have contributed to ADB downplaying an important feature of project design—to address the scarcity of the raw water needed to feed the project's distribution systems. Moreover, ADB did not ensure that the government was on board with consultant selection and feasibility studies. ADB followed up project progress through regularly fielded review missions that, surprisingly, always rated implementation progress satisfactory throughout a protracted operation that took more than double the time intended to complete. ADB's delegation of project oversight responsibility from headquarters to the resident mission in Tashkent fostered closer interaction with the borrower and a faster ADB response, according to the PCR. But the project continued to move very slowly and the satisfactory rating for implementation progress continued to be awarded.

C. Others

20. This project did not have an explicit poverty focus, although the PCR noted that 60% of the population of the project areas is poor. Even when the majority of the population is poor as in this case, project benefits can be expropriated by higher income groups among them. A project like this should provide more assurance that benefits would indeed be accessible to the poor.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

21. The PCR rated the project *successful* and this validation has the same rating (see table). The validation however downgraded the relevance rating from *highly relevant* to *relevant* since the project design lacked instruments to monitor the intended results. PCR quality is rated *satisfactory.*

Overall Ratings

Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Highly relevant	Relevant	Project design had some weaknesses (para. 9).
Effectiveness in achieving outcome	Less effective	Less than effective	
Efficiency in achieving outcome and outputs	Efficient	Efficient	
Preliminary assessment of sustainability	Likely	Likely	
Overall assessment	**Successful**	**Successful**	
Borrower and executing agency	Less satisfactory	Less than satisfactory	
Performance of ADB	Satisfactory	Satisfactory	
Impact	Significant	Moderate	Improved living conditions were not convincingly demonstrated (para. 17).
Quality of PCR		Satisfactory	Refer to para. 26.

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = project completion report.
Note: From May 2012, IED views the PCR's rating terminology of "partly" or "less" as equivalent to "less than" and uses this terminology for its own rating categories to improve clarity.
Source: ADB Independent Evaluation Department.

B. Lessons

22. The validation highlights three important lessons from the PCR. First, to help avoid serious delays during implementation as with this operation, project preparation must (i) ensure that a request to propose consulting services is ready, (ii) approve all advanced actions for procurement of consulting contracts to be able to field consultants early during implementation, (iii) ensure that feasibility studies will be ready for government approval early on, and (iv) prepare tender documents for the first contract package. Second, to attract and retain the high quality professional staff needed to ensure the timely and continuous implementation of a project to its successful completion, the PMU and PIUs must be able to offer competitive market compensation to interested and qualified candidates. Project implementation in this case suffered because of the poor capacity of the staff of these units. Third, especially when implementation is proving difficult, the project midterm review should be seized as an opportunity, within its budget envelope, to thoroughly review the project's scope and the realism of its implementation schedule. Another lesson, not brought out by the PCR, is the need of a project of this kind to pay attention to broader issues of water resource management.

23. Other PCR lessons that are obvious and well-known are needing to reduce implementation delays and ensuring that water supply networks have raw water to distribute and uninterrupted power to pump it. In addition to these lessons, the validation points out that the decision by ADB to waive an appraisal mission should not be taken lightly. In this case, the lack of an appraisal mission may have contributed to insufficient attention to both key aspects of project design and to ensuring borrower ownership. Also, without proper monitoring and evaluation with baseline data, targets, and reported results, the achievement of intended public health impacts by a project like this might occur but will be impossible to demonstrate.

C. Recommendations for Follow-Up

24. Of the PCR's nine recommendations and follow-up actions, the following are endorsed by the validation: (i) operational indicators such as water quality, nonrevenue water, and collection efficiency require constant monitoring to show that the project is continuing to deliver results; (ii) agencies responsible for the services have to engage in continuous operation and maintenance; (iii) although nonrevenue water has been reduced significantly, it is still high and should be reduced further; and (iv) the scope and reach of hygiene awareness campaigns could be extended through greater involvement of women in their dissemination.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Evaluation Design, Implementation, and Utilization

25. The PCR informed that the PMU set up a project performance monitoring system as early as 2004. It included performance indicators of social, economic, and environmental impact (all with baseline data but without a clear geographic spread) approved by ADB. Annual monitoring and evaluation reports were however never submitted to ADB.

B. Comments on Project Completion Report Quality

26. The PCR provided a good and concise coverage of the story of this project and is forthcoming about limited results achieved in some areas. It was candid when evidence did not exist, as on the project's health impacts. Its data provision was quite broad. It could have perhaps avoided already well-known lessons and misdirected recommendations such as calling for ADB to avoid water projects being affected by lack of raw water, when instead it should have recommended that ADB ensure that the scarcity of raw water be taken into account in designing these projects. This validation rates the PCR quality as *satisfactory.*

C. Data Sources for Validation

27. The following sources were used: the PCR, the report and recommendation of the President, back-to-office reports, and other project related documents, as well as data from Indonesian government web pages, and World Development Indicators.

D. Recommendation for Independent Evaluation Department Follow-Up

28. The validation recommends that the Independent Evaluation Department conduct a project performance evaluation assessment, as endorsed by the PCR. In particular, the assessment could verify the ongoing project operation and delivery of benefits, including health improvements.