

Technical Assistance

TAR: KAZ 35129

Technical Assistance to the Republic of Kazakhstan for Preparing the Second Rural Water Supply and Sanitation Sector Project (Financed by the Japan Special Fund)

September 2005

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 2 August 2005)

Currency Unit	–	tenge (T)
T1.00	=	\$0.007361
\$1.00	=	T135.8350

ABBREVIATIONS

ADB	–	Asian Development Bank
CWR	–	Committee for Water Resources
IDB	–	Islamic Development Bank
IEE	–	initial environmental examination
KfW	–	Kreditanstalt für Wiederaufbau
O&M	–	operation and maintenance
SIEE	–	summary initial environmental examination
TA	–	technical assistance

TECHNICAL ASSISTANCE CLASSIFICATION

Targeting Classification	–	General intervention
Sector	–	Water supply, sanitation, and waste management
Subsector	–	Water supply and sanitation
Themes	–	Inclusive social development, Environmental sustainability
Subthemes	–	Human development, Natural resources conservation

GLOSSARY

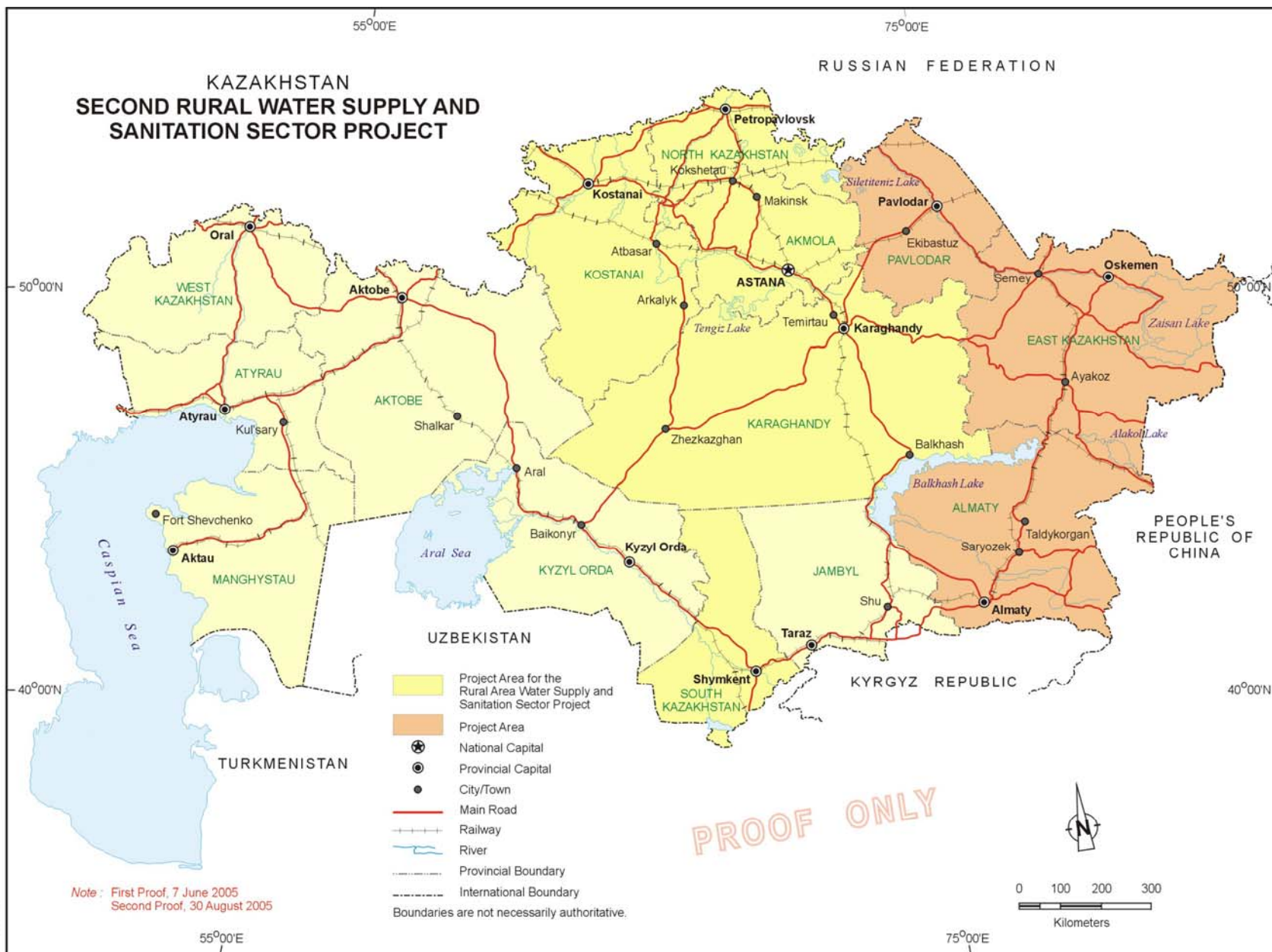
<i>banya</i>	–	public bathhouse
<i>oblast</i>	–	province
<i>raion</i>	–	district

NOTE

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

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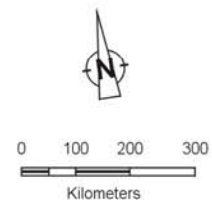
KAZAKHSTAN SECOND RURAL WATER SUPPLY AND SANITATION SECTOR PROJECT



- UZBEKISTAN**
- Project Area for the Rural Area Water Supply and Sanitation Sector Project
 - Project Area
 - National Capital
 - Provincial Capital
 - City/Town
 - Main Road
 - Railway
 - River
 - Provincial Boundary
 - International Boundary
- Boundaries are not necessarily authoritative.

Note: First Proof, 7 June 2005
Second Proof, 30 August 2005

PROOF ONLY



I. INTRODUCTION

1. The Government of Kazakhstan requested the Asian Development Bank (ADB) for technical assistance (TA) to prepare the Second Rural Water Supply and Sanitation Sector Project. The TA is included in the 2005–2007 country strategy and program update.¹ Fact-finding was undertaken in May 2005 and an understanding was reached with the Government on the impact and outcome, scope, cost and financing, implementation arrangements, and terms of reference for the TA. The design and monitoring framework is in Appendix 1.

II. ISSUES

2. The Government has accorded high priority to ensuring public access to safe drinking water which meets international standards. In particular, rural water supply services need improvement—both in terms of quality and quantity. According to the United Nations Human Development Report 2003,² one third of the rural population does not have access to safe drinking water. Only 9% of the rural population has access to water pipelines and 91% use local point sources such as wells (including artesian) and springs. There are few working wastewater collection systems or acceptable levels of human waste disposal in rural areas. Most wastewater is discharged to the nearest waterways without treatment. *Banyas* (public bathhouses) in many villages have largely fallen into disuse due to lack of water supply.

3. Much of the existing rural water supply system has gradually become inoperative. This network is the only source of drinking water for many villages, connected by thousands of kilometers of water mains. Almost all infrastructure—water intakes, water distribution networks, pumping stations, and water treatment plants—was constructed in the 1960s and 1970s and is severely deteriorated. Outdated technology, as well as limited maintenance and repair work over the decades, has created serious inefficiencies that make the current water supply systems unsustainable.

4. Kazakhstan's water supply systems are further aggravated by poor water quality. About 50% of the population uses drinking water that does not meet established standards of salinity, mineralization, and hardness. Insufficient wastewater management exacerbates the problem of surface and groundwater pollution. Water-borne diseases such as dysentery, typhoid fever, and viral infections have increased in recent years parallel with deteriorating quality of drinking water.

5. There are few functioning rural sanitation systems. Only a few *raion* (district) centers have sewerage systems, which collect wastewater and dispose of it without treatment. Elsewhere, wastewater is disposed of on the ground around the house or in a septic tank. Private toilets usually comprise simple non-sanitary pit latrines, which are dilapidated and replaced when full. Most school and hospital latrines are also in poor condition.

6. The Committee for Water Resources (CWR) under the Ministry of Agriculture directly manages the use and protection of water sources at the national level. The CWR is responsible for rural water supply development, irrigation, drainage, river basin water resources management, transboundary natural waters, and water use permits. The CWR provides advice on establishing or revising laws and regulations concerning use, management, protection, and

¹ ADB. 2004. *Country Strategy and Program Update (2005–2007): Kazakhstan*. Manila. The TA first appeared in *ADB Business Opportunities* (internet edition) on 7 April 2005.

² UNDP. 2003. *National Human Development Report*. Kazakhstan.

quality of surface and groundwater resources. In addition, CWR is the main implementing agency for locally or externally funded rural water supply and irrigation projects.

7. The Government developed the Potable Water Sector Program 2002–2010 in January 2002. The program emphasizes (i) development of groundwater resources; (ii) provision of water supply services to different social groups; (iii) improvement of water quality; (iv) strengthening of water resources protection; (v) gradual transfer from non-redeemable budget funding towards credit, with subsequent decentralization of investment; and (vi) water consumers' compliance with water legislation.

8. The project area will cover East Kazakhstan *oblast* (province), Pavlodar oblast, and Almaty oblast. In East Kazakhstan oblast, 667,000 rural inhabitants live in 856 rural settlements³ in 15 raions. Centralized water supply systems serve 218 rural settlements, 623 use decentralized systems, and 15 are supplied by water tanks. In Pavlodar oblast, 291,000 rural inhabitants live in 509 rural settlements in 13 raions. Centralized water supply systems are used in 97 rural settlements, 392 are served by decentralized systems, and 20 use water tanks. In Almaty oblast, 1,218,000 rural inhabitants live in 824 rural settlements in 19 raions. Centralized water supply systems serve 398 rural settlements, 414 use decentralized water sources, and 13 are supplied by water tanks.

9. In 2003, ADB approved the Rural Area Water Supply and Sanitation Sector Project,⁴ which will help improve living and health conditions for more than half a million people in rural areas by providing basic water supply and sanitation infrastructure and services. The loan became effective on 2 August 2005. ADB also approved two small-scale TA projects for institutional strengthening of the Committee for Water Resources (2004) and strengthening the water supply sector program (2005).⁵ Fieldwork for the institutional strengthening project started in May 2005 and a final report will be submitted in November 2005. The Islamic Development Bank (IDB), in collaboration with ADB, is helping provide water to rural Karagandy, promoting a common strategic approach. The Japan International Cooperation Agency is providing materials and equipment for rural water supply in North Kazakhstan. World Bank assistance in Kazakhstan has been focused on urban water supply.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

10. The TA will prepare a project to improve the living and health conditions of selected rural settlements suitable for ADB financing in the project area covering East Kazakhstan oblast, Pavlodar oblast, and Almaty oblast. The project area was selected because of (i) low water consumption due to lack of access to water, (ii) insufficient water supply systems, and (iii) deterioration of water supply and sanitation systems. The proposed project will fulfill immediate demand for drinking water supply and safe sanitation services in the project area by (i) upgrading water supply infrastructure and services (including levels of service and coverage); (ii) providing adequate sanitation services (including wastewater drainage facilities, school and

³ Rural settlements are defined as settlements with more than 50 people, in which no less than half of the population is engaged in the agriculture sector.

⁴ ADB. 2003. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Government of Kazakhstan for the Rural Area Water Supply and Sanitation Sector Project*. Manila

⁵ ADB. 2005. *Technical Assistance for Strengthening the Water Supply Sector Program*. Manila. ADB. 2004. *Technical Assistance for Institutional Strengthening of the Committee for Water Resources*. Manila.

hospital latrines, and bathhouses); (iii) improving the capacity of CWR and local communities to manage and operate water supply and sanitation facilities; and (iv) increasing hygiene and sanitation awareness. Impacts on the environment, involuntary resettlement, and indigenous peoples are not expected to be significant. It is envisaged that the proposed project may require small areas of land for small groundwater pumping stations and storage tanks. However, assessment will be carried out under the TA and, if necessary, mitigation measures/plans will be prepared and included in the project design.

B. Methodology and Key Activities

11. A sector loan approach will be applied to the proposed project. To qualify for funding, interested local governments will be required to show their willingness to participate actively in subproject planning, implementation, and operation and maintenance (O&M) by fulfilling a series of pre-project conditions to be identified under the TA. Feasibility studies will be conducted under the TA for four core subprojects. The TA will use the available sector study results and focus on identifying concrete measures that can be readily operationalized. The proposed measures will be discussed with key government officials and other stakeholders. The TA will follow the Government's feasibility study requirements for budget investment projects and programs⁶ as well as ADB project preparation guidelines. Lessons learned from the experience in implementing the Rural Area Water Supply and Sanitation Sector Project will be incorporated in the design of the proposed project.

12. Although the exact scope of the proposed project will be determined upon completion of the TA, the project is expected to comprise two parts: Part A—Physical Infrastructure and Part B—Institutional Development. Part A will include development and rehabilitation of water supply systems, wastewater facilities, school and hospital latrines, and bathhouses. Part B will include capacity building and education programs.

13. The TA will review socioeconomic conditions, and water supply and sanitation infrastructure and service delivery in the project area. The review will include (i) an assessment of physical, institutional, and human resources required for implementation of the proposed project; and (ii) description of the present facilities, planned future coverage, cost recovery, O&M arrangements, private sector involvement, and related policies. Particular attention will be paid to integrated water resources management and environmental concerns to ensure protection of water resources at regional and local levels.

14. The TA will consider (i) the possibility of transition (if necessary) from long-distance water pipelines, which are inefficient to operate and costly to maintain, to decentralized local water supply systems; (ii) use of modern water treatment and distribution technology; (iii) environmentally friendly and low-cost alternatives for sanitation and wastewater management techniques, such as on-plot and on-block treatment systems; and (iv) more effective O&M for the improved water supply systems at raion and settlement levels. The feasibility study for the core physical infrastructure subprojects will cover (i) preparation of preliminary engineering designs and cost estimates, (ii) assessment of financial and economic viability and sustainability, (iii) assessment of environmental and social soundness, (iv) development of a design and monitoring framework and implementation arrangements, and (v) establishment of criteria and guidelines to select subprojects to be proposed by interested local governments. The TA will also formulate an institutional development program including

⁶ Ministry of Economy and Budget Planning. 2004. *Requirements to Feasibility Studies for Budget Investment Projects (Programs)*. Kazakhstan.

(i) a development plan for the executing agency, implementing agency, and related local government agencies to strengthen financial and managerial capacity for the proposed project; (ii) preparation of an effective O&M plan for the improved water supply and sanitation infrastructure; and (iii) development of project-specific education and training programs for local government agencies and participating local communities to increase awareness on hygiene and sanitation.

C. Cost and Financing

15. The total cost of the TA is estimated at \$930,000 equivalent, comprising \$445,000 in foreign exchange costs and \$485,000 equivalent in local currency costs. The Government has requested ADB to finance \$650,000 equivalent covering the entire foreign exchange costs and \$205,000 equivalent in local currency costs. The TA will be financed on a grant basis by the Japan Special Fund, funded by the Government of Japan. The Government will finance the balance of the local currency cost, equivalent to \$280,000, by providing office space, utilities, local communications, administrative support, and counterpart staff. Detailed cost estimates are in Appendix 3. The Government has been informed that approval of the TA does not commit ADB to finance any proposed project.

D. Implementation Arrangements

16. The Ministry of Agriculture will be the Executing Agency for the TA and will provide policy guidance, facilitate interagency coordination, and resolve any institutional problems. CWR will be the Implementing Agency and will oversee day-to-day TA implementation. CWR will also provide a furnished office for the consultant, with utilities, telecommunication access, materials, maps, data, and all required project documents. CWR will appoint a senior officer as project manager, assisted by other qualified counterpart staff.

17. The TA will require 13 person-months of international and 70 person-months of domestic consulting services. The international consultants will include a water supply and sanitation specialist/team leader (5 person-months), an economic analyst (2 person-months), a financial management specialist/financial analyst (2 person-months), a social development/community participation specialist (2 person-months), an environmental specialist (1 person-month), and a resettlement specialist (1 person-month). The domestic consultants will include a water supply and sanitation engineer/deputy team leader (6 person-months), a water supply and wastewater engineer (5 person-months), a financial analyst (5 person-months), an economist (5 person-months), civil engineers (8 person-months, 2 positions), an electrical engineer (4 person-months), a hydro-geological engineer (4 person-months), design engineers (8 person-months, 2 positions), a cost estimate engineer (4 person-months), an institutional development specialist (5 person-months), an environment specialist (5 person-months), a community participation specialist (5 person-months), a gender and poverty specialist (4 person-months), and a resettlement specialist (2 person-months). ADB will select and engage consultants in accordance with ADB's *Guidelines on Use of Consultants* and other arrangements satisfactory to ADB for the selection and engagement of domestic consultants. The quality and cost-based selection method using simplified technical proposal procedures will be followed. The consultants may procure equipment through direct purchase in accordance with ADB's *Guidelines for Procurement*. Upon completion of the TA, equipment procured under the TA will be transferred to CWR. The consultants will hold workshops on the proposed project's planning and design with the participation of related government agencies and local communities. Outline terms of reference for the consultants are in Appendix 4.

18. The TA will be implemented over 6 months, from January to June 2006. The major reports required from the consultants are (i) an inception report describing the detailed work program within 3 weeks of TA start, (ii) an interim report within 3 months of TA start, (iii) a draft final report within 5 months of TA start, and (iv) a final report at TA completion. Tripartite meetings will be held with the Government, ADB, and the consultants to discuss the TA reports. A final report will be submitted 2 weeks after receiving comments from the Government and ADB. All reports will be prepared in both English and Russian. A separate feasibility study report will be prepared in Russian, in accordance with the Government's feasibility study requirements for budget investment projects and programs.

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$650,000 on a grant basis to the Government of Kazakhstan for preparing the Second Rural Water Supply and Sanitation Sector Project, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Impact Improved living and health conditions of selected rural settlements in the project area	Upgraded water supply infrastructure and services Adequate sanitation services Improved capacity of CWR and local communities to manage and operate water supply and sanitation facilities Increased hygiene and sanitation awareness	CWR report	Assumptions <ul style="list-style-type: none"> • Project design implemented effectively • Government and ADB sign loan agreement
Outcome Project design and feasibility study agreed by Government and ADB	Memorandum of understanding signed by Government and ADB during July 2006 Appraisal Mission	Memorandum of understanding	Assumptions <ul style="list-style-type: none"> • Government priority unchanged
Outputs <ol style="list-style-type: none"> 1. Technical assessments completed 2. Project design requirements accomplished 	Draft final report submitted to Government and ADB by June 2006	ADB document registration Government document registration	Assumptions <ul style="list-style-type: none"> • Competent government staff available Risks <ul style="list-style-type: none"> • Lack of government familiarity with decentralized infrastructure management • Inadequate tariff setting and collection
Activities with Milestones <ol style="list-style-type: none"> 1.1 Review project area socioeconomic conditions, and water supply and sanitation infrastructure and service delivery. <ol style="list-style-type: none"> 1.1.1 Assess physical, institutional, and human resources required for project implementation (by April 2006). 1.1.2 Describe current facilities, planned future coverage, cost recovery, O&M arrangements, private sector involvement, and related policies (by April 2006). 2.1 Feasibility studies for physical infrastructure <ol style="list-style-type: none"> 2.1.1 Prepare preliminary engineering designs and cost estimates (by June 2006). 2.1.2 Assess financial and economic viability and sustainability (by June 2006). 2.1.3 Assess environmental and social soundness (by June 2006). 2.1.4 Develop design and monitoring framework and implementation arrangements (by June 2006). 2.1.5 Establish criteria and guidelines to select subprojects to be proposed by interested local governments (by June 2006). 			Inputs ADB: \$650,000 <ul style="list-style-type: none"> • Consulting Services 83 PM – \$555,000 • Equipment – \$10,000 • Training, seminars & conferences – \$10,000 • Representative for Contract negotiations – \$10,000 • Contingencies – \$65,000 Government: \$280,000 <ul style="list-style-type: none"> • Personnel – \$100,000 • Logistics – \$180,000

<p>2.2. Institutional development</p> <ul style="list-style-type: none">2.2.1 Formulate a development plan for the EA, IA, and related local government agencies to strengthen financial and managerial capacity needed for the proposed project (by June 2006).2.2.2 Prepare an effective O&M plan for the improved water supply and sanitation infrastructure (by June 2006).2.2.3 Develop project-specific education and training programs for local government agencies and participating local communities to increase hygiene and sanitation awareness (by June 2006).	
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ADB = Asian Development Bank, CWR = Committee for Water Resources, EA = executing agency, IA = implementing agency, O&M = operation and maintenance.

INITIAL POVERTY AND SOCIAL ANALYSIS

A. Linkages to the Country Poverty Analysis

Is the sector identified as a national priority in country poverty analysis?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the sector identified as a national priority in country poverty partnership agreement?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Contribution of the sector or subsector to reduce poverty in Kazakhstan:</p> <p>The proposed Project will contribute to improved wellbeing and health conditions for more than a half million people in rural Kazakhstan by providing basic water supply, and sanitation infrastructure and services. The proposed Project will also create employment opportunities during project construction.</p>			

B. Poverty Analysis

Targeting Classification: General intervention

<p>What type of poverty analysis is needed?</p> <p>Poverty analysis will be carried out to summarize the causes of poverty in the project area, identify the highest incidence of poverty, develop poverty criteria to select additional subprojects, quantify how the project will help reduce poverty, and incorporate other social measures within the scope of project design, implementation, and monitoring. The analysis will be conducted according to ADB's <i>Handbook on Poverty and Social Analysis</i>.</p>

C. Participation Process

<p>Is there a stakeholder analysis? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Stakeholder analysis will be conducted to (i) identify key stakeholders and establish a framework for stakeholder participation in project design, implementation, and monitoring; and (ii) ensure that project objectives and incentives for change are acceptable to intended beneficiaries and that project design reflects gender and other social differences.</p>
<p>Is there a participation strategy? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>User participation in project design and implementation and water service management is crucial to (i) increase efficiency, equity, and cost recovery; and (ii) facilitate the extension of service coverage to poor communities. A community participation strategy will be developed for operation and maintenance.</p>

D. Gender Development

<p>Strategy to maximize impacts on women:</p> <p>Women should have equal opportunities in terms of access to water, participation in carrying different responsibilities, control of water resources, and the capacity and skills to participate in water management. The active participation of women in water management is crucial to equitable and productive water use and the sustainability of the water sector. Gender analysis will be conducted to ensure the inclusion of a gender perspective in project design, implementation, and monitoring. A gender action plan will be prepared to incorporate gender issues in water management.</p>
<p>Has an output been prepared? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

E. Social Safeguards and Other Social Risks

Item	Significant/ Not Significant/ None	Strategy to Address Issues	Plan Required
Resettlement	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	<p>In view of the sector loan approach of the proposed project, specific land acquisition and resettlement requirements have not been identified. However, it is envisaged that the proposed project may require small areas of land for groundwater pumping stations and storage tanks. Resettlement plans for two core subprojects and a resettlement framework will be prepared following the Government Land Administration Laws and ADB's <i>Policy on Involuntary Resettlement</i>.</p>	<input type="checkbox"/> Full <input checked="" type="checkbox"/> Short <input type="checkbox"/> None
Affordability	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	<p>An affordability analysis will be conducted as part of the economic analysis.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Labor	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	<p>The proposed project will not have any negative impacts on employees of the Committee for Water Resources. It will create employment opportunities—particularly for the rural poor—during and after construction of water and sanitation services.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Indigenous Peoples	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	<p>The presence of ethnic minority groups will be reviewed and analyzed in the project area in accordance with ADB's <i>Policy on Indigenous Peoples</i>. A plan for specific actions will be prepared, if necessary.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Other Risks and/or Vulnerabilities	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	<p>Other social risks and vulnerability issues will be assessed as part of the poverty and social assessments.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Foreign Exchange	Local Currency	Total Cost
A. Asian Development Bank Financing^a			
1. Consultants			
a. Remuneration and Per Diem			
i. International Consultants	335.00	0.00	335.00
ii. Domestic Consultants	0.00	140.00	140.00
b. International and Local Travel	35.00	25.00	60.00
c. Reports, Communications, and Translation	10.00	10.00	20.00
2. Equipment ^b	10.00	0.00	10.00
3. Training, Seminars, and Conferences	0.00	10.00	10.00
4. Representative for Contract Negotiations	10.00	0.00	10.00
5. Contingencies	45.00	20.00	65.00
Subtotal (A)	445.00	205.00	650.00
B. Government Financing			
1. Office Accommodation and Utilities	0.00	100.00	100.00
2. Remuneration of Counterpart Staff	0.00	100.00	100.00
3. Studies, Data, and Reports	0.00	80.00	80.00
Subtotal (B)	0.00	280.00	280.00
Total	445.00	485.00	930.00

^a Financed by the Japan Special Fund, funded by the Government of Japan.

^b Equipment will include computers, a printer, a copier, and a facsimile machine.
Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. General

1. The consultant team will comprise international and domestic consultants. All consultants will work collectively as a team in developing all outputs. Consulting services required for the technical assistance (TA) will include, but not be limited to, the services described in this appendix. The team leader and the Asian Development Bank (ADB) project officer may increase the tasks outlined as required to (i) comply with ADB guidelines and procedures, and the Government's feasibility study requirements for budget investment projects and programs; and (ii) improve the quality of the overall TA. Tasks are to be carried out in close cooperation with the Government, and extensive consultation is needed to ensure knowledge transfer and full ownership of the processes and documents by the government agencies concerned.

2. The consultants will coordinate closely with ongoing ADB-financed projects¹ to ensure that they complement each other and support overall improvement of the rural water supply and sanitation sector. The consultants will also reflect the lessons learned from implementing these projects into the design of the proposed project.

3. The consultants will coordinate with Kreditanstalt für Wiederaufbau (KfW) and the Islamic Development Bank (IDB) as potential cofinanciers. KfW and IDB requirements for project preparation, implementation arrangements, and loan disbursement should be considered under the TA and incorporated in the design of the proposed project.

4. The team leader will (i) assist in the overall organization of the TA; (ii) guide, supervise, and coordinate the work of team members; and (iii) take overall responsibility for preparing and consolidating reports prepared by team members. The deputy team leader will support the team leader in accomplishing these tasks.

B. Data and Information Collection

5. **Government Policies and Plans.** The consultant will review the Government's policies and investment plans in water supply and sanitation, propose improvements, and make specific recommendations on local government investment plans in the project area. The consultants will link the policies and plans with the proposed project, and describe how they will promote the sector's efficiency and economic growth in the project area. The consultants will focus on integrated water resources management and environmental concerns to ensure protection of water resources at the regional and local levels.

6. **Project Area.** The consultants will collect information on (i) socioeconomic conditions, (ii) spatial and physical environmental conditions, (iii) demographic information, (iv) land use and settlement patterns, (v) poverty incidence, and (vi) incidence of waterborne and hygiene-related diseases.

¹ Related ADB-funded projects include a loan for the rural area water supply and sanitation sector project, and small-scale technical assistance for institutional strengthening of the Committee for Water Resources and for strengthening the water supply sector program.

7. **Rural Water Supply and Sanitation Infrastructure and Services.** The consultants will collect and assess data in the project area regarding (i) current and future use of existing water resources; (ii) service levels and conditions of existing infrastructure for rural water supply and sanitation (including water intake, water distribution networks, pumping stations and water treatment plants, wastewater drainage, private and school latrines, and bathhouses); (iii) water demand for the next 10–15 years; (iv) water use, quality, and unaccounted-for water; (v) institutional relationship and responsibilities of central and local government agencies; (vi) budgeting and financial management for rural water supply and sanitation; (vii) existing operation and maintenance (O&M) system of rural water supply and sanitation facilities; and (viii) level of community involvement and participation in project preparation, implementation, and post-project O&M activities.

8. **External Assistance to the Sector.** The consultants will review past and ongoing external assistance by ADB and other funding agencies in rural water supply and sanitation, identify broad patterns of assistance and sector policy thrusts of these agencies, and document the lessons learned.

C. Feasibility Studies

9. **Sector Project.** The consultants will prepare a sector project following the sector lending approach, including the required policy dialogue and assessment of institutional capacity. Feasibility studies will be conducted for four core subprojects in the project area. Based on the selection and eligibility criteria developed under the TA, the consultants will also identify target subprojects for the proposed project (to the extent possible).

10. **Project Design.** The consultants will (i) describe the overall features of core subprojects for rural water supply and sanitation improvement (including public bathhouses, and school and hospital latrines); (ii) determine if the subprojects are justified (based on poverty reduction, demand trends, supply constraints, and growth potential); (iii) review alternative technologies and recommend the lowest cost and most environmentally sustainable option for improved rural water supply and sanitation infrastructure and services (considering transition from costly long-distance water pipelines to local water supply networks), (iv) propose the use of modern water treatment and distribution technologies, and environmentally friendly techniques for sanitation and wastewater management; (v) review and prepare design criteria and standards (including per capita water consumption for house connections, public water tanks, and public standpipes); and (vi) prepare preliminary engineering designs for the core subprojects.

11. **Cost Estimates.** The consultants will prepare cost estimates for the core subprojects broken down into direct and indirect foreign exchange costs and local currency costs, and presented by generic category—i.e., by land, civil works, materials and equipment, consulting services, incremental administration, and O&M—for each year. Physical and price contingencies should be included in the cost estimates. The tax and duty elements and interest during construction should be calculated separately. The consultants will identify procurement contracts for international competitive bidding, local competitive bidding, international shopping, or direct purchase in accordance with ADB's *Guidelines on Procurement*.

12. **Financial Analyses.** The consultants will conduct financial analyses with sensitivity tests of the core subprojects in accordance with ADB's *Guidelines for the Financial Governance and Management of Investment Projects Financed by ADB*. The consultants will (i) review water tariff level and structure, and determine its adequacy, comparing it with the average incremental financial cost of the core subprojects; (ii) review the Government's plan for installation of water

meters for all water users and assess the possible impacts on water tariff and conservation; (iii) recommend necessary improvements, cross subsidies, affordability, water conservation, future operating capacity, replacement and expansion, and debt repayment; and (iv) recommend a tariff increase plan, considering affordability. The consultants will (i) assess the financial viability of the core subprojects, analyze the financing plan, estimate the financial internal rate of return, and perform sensitivity and risk analysis (including switching values and calculation of the real weighted average cost of capital); (ii) identify areas for improvement and training; (iii) review past financial performance and evaluate EA and IA's financial capacity; review current internal and external or government audit arrangements; and (iv) prepare income statement, balance sheets, and cash flow statements for relevant water and wastewater entities in nominal terms and forecast the results for 5 years from full project start.

13. Financial Management Assessment. The consultants will (i) assess the financial management of the proposed EA and IAs, including (a) corporate planning and budgetary control, (b) financial and management accounting, (c) cost accounting, (d) internal control and audit system, and (e) data processing; (ii) suggest appropriate financial covenants to monitor financial conditionalities of the proposed project; and (iii) recommend ways to improve financial management and corporate governance in light of ADB's *Governance: Sound Development Management* policy, and refer to ADB's Financial Management Assessment Questionnaire, and Financial Due Diligence Methodology Note in completing the financial management assessment.

14. Economic Evaluation. The consultants will analyze the Government's investment plan and ADB's role in supporting the plan through the proposed project. The economic analysis will cover at least the following areas: (i) economic rationale for government investment, including why and how the Government should be involved; (ii) investment plan goals (including evaluation of whether the goals are adequately specified and have public support); (iii) the investment plan (including simplified economic selection criteria to ensure it meets goals at least-cost); (iv) associated policies (including tariffs policy); (v) economic risks to implementing the plan and achieving the goals; (vi) government capacity to implement the plan (including capacity to apply economic selection criteria); (vii) fungibility of government funds; (viii) government commitment to the investment plan; (ix) coordination of other foreign aid agencies supporting the investment plan; and (x) conditions attached to the proposed project. The analysis should be consistent with ADB's *Guidelines for the Economic Analysis of Projects*, recent retrospective reports on economic analysis, and relevant technical notes published by ADB's Economics and Research Department—in particular technical notes on user charges and sector lending.

15. Environmental Assessment. The consultants will (i) identify sector development needs, examine policy and institutional changes to be pursued in the proposed project (to determine their environmental implications), and introduce appropriate beneficial policy interventions that can be included in the design and monitoring framework; (ii) establish criteria for environmental categorization of subprojects depending on their scope and scale (including categories A, B, B sensitive, and C); and (iii) establish environmental assessment and review procedures during subproject selection, design, appraisal, and implementation. The consultants will select and appraise the core subprojects. As part of appraisal, the consultants will (i) develop alternatives; (ii) assess comprehensive environmental impacts; (iii) design mitigation measures, an environmental monitoring plan with monitoring indicators, and institutional arrangements and responsibilities (including cost estimates and training); (iv) develop environmental impact assessment methodology (including cumulative and/or synergistic impacts); and (v) develop environmental assessment and review procedures for the remaining

subprojects to be financed under the proposed project. On this basis, the consultants will (i) help the Government prepare the initial environmental examination (IEE) for the whole project—including sample IEEs for core subprojects, and summary IEEs (SIEEs)—in accordance with ADB's *Environmental Assessment Guidelines*; (ii) conduct public consultation at least once; (iii) submit SIEE to the national environmental protection agency for final review; and (iv) decide if significant impacts warranting environmental impact assessments are likely. The consultants will review the EA and IAs' institutional capacity in environmental monitoring and management, and prepare a capacity development program, if necessary.

16. Community Participation and Cost Sharing. The consultants will (i) prepare a community participation strategy for project preparation, implementation, and post-project O&M; and review the performance of community-based organizations and their interaction with project-affected communities; and (ii) conduct stakeholder analysis using tools such as household surveys, interviews, and focus groups discussions. Careful attention will be paid to central and local government financing capacity, cost recovery, community ownership/participation, and cost-sharing options.

17. Poverty and Social Analyses. The consultants will conduct poverty and social analyses for the core subprojects in accordance with ADB's *Handbook on Poverty and Social Analysis*. The consultants will prepare a socioeconomic profile based on (i) gender disaggregated data covering water supply and sanitation use (including the availability and accessibility of water and consumption levels); (ii) knowledge, attitudes, and practices of water supply and sanitation; (iii) existence and formation of water user groups; and (iv) current financing systems for water, household income levels and ability to pay by different groups, and tariff levels and their impact on household budget. The consultants will (i) conduct gender analysis for the core subprojects in accordance with ADB's *Gender Checklist: Water Supply and Sanitation* and develop a gender action plan linked to project components with targets, indicators, implementation arrangements, and budgetary requirements; (ii) assess the socioeconomic benefits of the proposed project and its possible negative impacts—especially on the poor; and (iii) ensure the project design reflects local needs, preferences, and concerns. The consultants will review and analyze the presence of ethnic minority groups in the project area in accordance with ADB's *Policy on Indigenous Peoples*, and a plan for specific actions will be prepared, if necessary.

18. Resettlement Planning. The consultants will (i) screen two core subprojects for involuntary resettlement impacts arising from land or right-of-way acquisition; and (ii) develop a resettlement framework for other subprojects and resettlement plans for two core subprojects—in accordance with ADB's *Involuntary Resettlement* policy and *Handbook on Resettlement: A Guide to Good Practice*—addressing any full or partial loss of housing, land, income from affected businesses, and impacts on non-titled and vulnerable people. The consultants will (i) review the experience and capacity of the EA and IAs in planning, implementing, and monitoring resettlement; and (ii) prepare a program to strengthen their ability to manage resettlement activities, if necessary.

19. Project Performance Monitoring System. The consultants will undertake a structured problem analysis, prepare a problem tree, and derive a design and monitoring framework in consultation with concerned government agencies and project stakeholders. The design and monitoring framework will aim to facilitate conceptualization of the proposed project design, monitoring of project implementation, and evaluation of project benefits and impacts—with emphasis on enhanced participation of beneficiaries and stakeholders. The consultants will develop a project performance monitoring system that includes the content and format of the progress reports and ensures that the beneficiaries also undertake monitoring and evaluation.

20. **Implementation Arrangements.** The consultants will (i) develop an implementation schedule and arrangements to execute all components; (ii) verify the flow of funds under the proposed project; (iii) assess the performance of Loan 2006-KAZ² and propose implementation arrangements for the proposed project; and (iv) determine the requirements for and availability of national and local counterpart funds: (a) specify the amounts to be financed by ADB, KfW, IDB, central Government, local governments, and other agencies; and (b) prepare an ADB format financing plan (using COSTAB software) referring to ADB's draft Technical Note on Preparation and Presentation of Cost Estimates. The financing plan will describe the maturity, grace periods, relending arrangements, and possible subsidies, if any. The consultants will (i) establish functional relationships between participating institutions and describe the EA and IAs for the proposed project; and (ii) recommend measures to facilitate project implementation (including staffing and training for staff of the EA and IAs, construction supervision, monitoring, and reporting of the subprojects, and consulting services during implementation).

21. **Selection and Eligibility Criteria.** The consultants will develop and agree with the Government a set of criteria to select target rural settlements in the project area, including (i) poverty incidence, (ii) water supply and sanitation infrastructure service level, (iii) affordability for rural households, (iv) sustainable environmental improvements, and (v) level of community participation.

D. Institutional Development

22. **Capacity Building.** The consultants will (i) assess the existing institutional capacity of the EA, IAs, local governments, and other participating agencies; (ii) identify needs for technical, financial, and organizational development; and (iii) develop a capacity building program (including staff training for the EA, IAs, local governments, and other participating agencies) to strengthen their capacity to efficiently manage, implement, and monitor the proposed project.

23. **Operation and Maintenance.** The consultants will (i) review existing water supply and sanitation facility O&M systems; and (ii) recommend organizational setup and financing mechanisms to facilitate decentralization and improve O&M effectiveness of improved water supply and sanitation infrastructure. A specific proposal to establish a technical unit at the *raion* (district) level (i.e., state enterprise) and an operational unit at the settlement level (i.e., water users group) should be prepared. The consultants will prepare a training program, list of equipment, and financial requirements necessary for decentralized O&M units.

24. **Education and Training.** The consultants will (i) assess the needs of government officials, local authorities, and local communities for education and training on hygiene and sanitation; (ii) develop education and training programs to increase people's awareness of hygiene and sanitation and ensure community participation in O&M of the improved rural water supply and sanitation infrastructure; and (iii) develop a mechanism to promote community participation in planning, monitoring, and evaluation.

² ADB. 2003. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to Kazakhstan for the Rural Area Water Supply and Sanitation Sector Project*. Manila.