

ASIAN DEVELOPMENT BANK

TAR: AZE-35087

TECHNICAL ASSISTANCE
(Financed from the Japan Special Fund)

TO THE

REPUBLIC OF AZERBAIJAN

FOR PREPARING THE

URBAN WATER SUPPLY AND SANITATION PROJECT

November 2001

CURRENCY EQUIVALENTS

(as of 31 October 2001)

Currency Unit	–	Azerbaijan manat (AZM)
AZM1.00	=	\$0.00021
\$1.00	=	AZM4,660

ABBREVIATIONS

ADB	–	Asian Development Bank
CAC	–	State Committee on Architecture and Construction
IDP	–	internally displaced people
KfW	–	Kreditanstalt für Wiederaufbau
TA	–	technical assistance
WSS	–	water supply and sanitation

NOTE

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

I. INTRODUCTION

1. During the 2001 second-phase Country Programming Mission, the Government of the Republic of Azerbaijan asked the Asian Development Bank (ADB) to prepare a project addressing water supply and sanitation (WSS) needs in the country's secondary towns and communities. The project preparatory technical assistance (TA) Fact-Finding Mission visited Azerbaijan during 13-24 July 2001; held discussions with officials from the State Committee on Architecture and Construction (CAC); Department for Foreign Investment and Technical Assistance of the Cabinet of Ministers; Ministry of Finance; Ministry of Economic Development; Azerbaijan Rehabilitation and Reconstruction Agency; and the Sheki district executive authorities. An understanding was reached with the Government on the objectives, scope, cost estimates, financing plan, and implementation arrangements for the TA.¹ The preliminary project framework is attached as Appendix 1.

II. BACKGROUND AND RATIONALE

2. About half of Azerbaijan's population of 8.1 million lives in urban areas, with approximately 2 million people residing in the capital city of Baku. For the purposes of this report, towns and communities outside of the Greater Baku area² are defined as secondary towns, including the second largest city (Ganja), 23 urban centers with populations above 20,000, and 25 towns with populations below 20,000. The initial poverty assessment³ shows that smaller towns have a larger share of poor people and internally displaced people.⁴

3. Since independence in 1991, the country's basic infrastructure, such as water supply, wastewater, and sanitation, has significantly deteriorated in terms of physical assets and services. In addition, inefficient institutional arrangements in the sector have resulted in inappropriate tariffs, low collection rates, and poor financial state of water utilities. As an outcome, many households outside of the capital have access to potable water only once in 2-3 days for 2-4 hours, and water consumption in some areas barely reaches the internationally recognized minimum of 20-25 liters per capita per day. Waterborne diseases are widespread, especially in small towns and rural areas.

4. Realizing the severity of the situation in the WSS sector, the Government has undertaken initial reforms that (i) created an independent joint stock Apsheron Regional Water Company to serve the Greater Baku and the Apsheron peninsula areas; (ii) changed the organizational structure in the sector (merging the Committee for Housing and Communal Property into the Committee for Architecture and Construction);⁵ and (iii) recognized the need to decentralize basic infrastructure services to local authorities (adoption of the Water Supply and Wastewater Law and a series of laws on municipalities).

5. Despite these reforms, the WSS sector faces serious technical, institutional, and financial problems. The average age of the pipe network in the country is about 40 years. None

¹ The TA first appeared in *ADB Business Opportunities* in June 2001.

² It covers the cities of Baku and Sumgayit, and their fringe areas in the Apsheron Peninsula.

³ According to the World Bank's *Azerbaijan Poverty Assessment* (1997), about 60 percent of households are classified as poor and 20 percent as very poor. The poverty situation is being further assessed under the ongoing national Poverty Reduction Strategy Program, assisted by ADB in collaboration with other development partners.

⁴ Individuals and families forced to leave their homes in the course of the Armenian-Azerbaijan conflict over the Nagornyi Karabakh territory. Roughly half of the country's 800,000 refugees and internally displaced people live outside of the Greater Baku area.

⁵ Decree No. 471 of the President of Azerbaijan Republic of 19 April 2001.

of the 57 serviced districts in the country has an appropriate WSS system in terms of both quality and quantity. In secondary towns, less than 10 percent of water production uses safe groundwater. The rest is from surface water and groundwater sources that are increasingly being polluted by industrial and domestic sources. Wastewater treatment facilities exist in only 17 towns, and in almost all of them, are nonfunctional. In many regions the untreated sewage water flows into rivers and canals that are used for irrigation of agricultural crops, and seep into underground water. The lack of funding for repairs and rehabilitation of aging assets (pipes, pumping stations, valves, water treatment facilities, etc.) and construction of new facilities is rooted in institutional and financial problems.

6. The institutional structure of the sector is characterized by unclear responsibilities of the involved parties, i.e., the CAC and its department *AzerSuKanal*, which is in charge of water supply and sanitation, the department's 57 local branches (water and wastewater enterprises of the *AzerSuKanal* system), regional executive authorities, service industry, and the private sector. Fragmentation of functions is exacerbated by the absence of coherent planning for the country's water resources, the tendency for adhoc policy decisions (especially on private sector participation), dubious investment choices, and a poor financial state of water utilities.

7. With the ongoing transition to a market economy, previously significant government subsidies to the WSS sector have disappeared. However, the current tariff system is still ill-equipped to cover operation and maintenance and depreciation costs of the water utilities. In addition, the collection rates are extremely low and collection in cash is even lower.⁶ In other words, water utilities are experiencing a financial crisis, and therefore, their services are unsustainable.

8. Assistance from funding agencies for WSS services is limited. The World Bank's \$61 million Greater Baku Water Supply Rehabilitation Project, approved in 1994 and cofinanced by European Bank for Reconstruction and Development for ECU21 million (\$22.9 million), focuses only on improving the water supply to the Baku area, and reorganizing the city water utility into a joint stock company, Apsheron Regional Water Company. In other parts of the country, official development assistance is scarce, except for the German Kreditanstalt für Wiederaufbau (KfW) agency's Open Program loan for DM29 million (\$13.6 million) to rehabilitate water supply facilities in the cities of Ganja, Imishli, Nakhchevan, and Sheki.

9. If this situation is not reversed, the continuing deterioration of WSS systems in secondary towns will result in their eventual collapse with serious consequences for the well-being of current and future generations of Azerbaijan's population, especially the poor. The need to provide assistance to the WSS sector is urgent. ADB has a long experience with WSS projects, and recently gained experience with similar projects in the Central Asian transition economies. The goals of the TA and the ensuing Urban Water Supply and Sanitation Project are in line with the strategic objective of ADB's assistance to Azerbaijan, which is to enhance human and social development and poverty reduction. The assistance to safe and reliable water supply and adequate sanitation provision is one of the focal areas of the interim operational strategy to strengthen the provision of public goods and services to those in greatest need and to promote Azerbaijan's non-oil sector.

⁶ On average, *AzerSuKanal* local branches collected 40 percent of their billings in late 1990s, and only 14 percent of their total revenue was in cash. The rest of the revenue was received through barter or off-sets (taxes owed to the Government against water fees of budget organizations). World Bank. 2000. *WSS Sector Review and Strategy*. Washington, DC.

III. THE TECHNICAL ASSISTANCE

A. Objectives

10. The main objectives of the TA are to (i) analyze the WSS sector in secondary towns in Azerbaijan; and (ii) identify and prepare an investment project to rehabilitate WSS services and provide institutional restructuring for these in selected towns for possible ADB funding.⁷ The level and quality of WSS services will be determined with the respective communities, and project preparation will seek to establish conditions for the sustainable development of these services.

B. Scope

11. The TA comprises two parts.

12. **Part A: Water Supply and Sanitation Sector Analysis in Secondary Towns.** A review of the sector will be carried out to determine the current state of service provision and physical infrastructure in the country's secondary towns. The review will provide a detailed assessment of the existing institutional arrangements in the sector, the current technical state of WSS infrastructure, and the financial state of water utilities in regions outside of the Greater Baku area. The sector analysis will include an update of the sector organization and legal framework; an assessment of asset quality; the degree of unaccounted for water (losses and wastage); an analysis of current production costs, water tariffs, and collection rates; and operation and maintenance arrangements.

13. The sector analysis will examine the existing reviews and other relevant information, and will consider the experience of international development assistance in the sector. Based on the findings of the sector analysis, a longlist of priority locations will be identified according to the following criteria: (i) most urgent needs for WSS service provision, (ii) maximum impact on poverty reduction, and (iii) local authorities' commitment to reforms and willingness to participate in an investment project.

14. By identifying the major problems, inconsistencies, and other impediments to efficient service delivery, the WSS sector analysis will serve as a background for a policy dialogue with central and local governments for restructuring municipal WSS services. To mitigate the eventual collapse of WSS services provision, and to lay a foundation for sustainable sector development, a short- and medium-term action plan will be prepared. As main challenges in the sector evolve around three dimensions—institutional, technical, and financial—the policy dialogue and the resulting action plan will primarily focus on these directions.

15. In the institutional area, a clear delineation of functional responsibilities among major stakeholders (i.e., institutions and agencies at different government levels, water enterprises, private sector, and consumers) will be addressed. Alternative investment options in secondary towns and cost-effectiveness of these investments will be discussed under the technical aspects of the required action plan. As the existing technical problems are closely related to the sector's financial challenges, the action plan will specifically look at financial viability of service providers through cost recovery, an appropriate tariff policy, and improved financial management of water utilities. The action plan will develop an acceptable mechanism to ensure access to basic infrastructure services by poor groups, including an appropriate tariff structure with the use of

⁷ The exact scope of the project will be determined during the preparatory TA. The project is expected to include water supply and/or sanitation components in 2-4 secondary towns. The estimated total cost of the investment project is \$33 million.

lifeline tariffs, a subsidy policy for the poorest, and/or use of appropriate low-cost technical solutions.

16. **Part B: Identification of Project and Feasibility Analysis.** Based on prioritization developed in Part A, the longlist of towns will be screened to identify 2-4 secondary towns for feasibility analysis of WSS components for ADB funding. The screening will be based on (i) analysis of investment alternatives and cost-effectiveness of investments, (ii) prospects of cost recovery and financial sustainability, (iii) availability of counterpart funds, and (iv) coordination with international lending institutions.⁸

17. Preparation for these selected project components will cover (i) technical, economic, and financial feasibility; (ii) social analysis and community participation; (iii) environmental considerations; (iv) budgetary implications of the agreed financing plan and communities' affordability and willingness to pay for the services; and (v) institutional implementation arrangements, including, where appropriate, local private sector involvement.⁹

18. For each component identified, targeting of the poor, including internally displaced people, for improved WSS services will be analyzed, and a detailed program for ensuring their access to WSS services will be prepared. A capacity-building program will be outlined, including training for staff involved with project implementation and management. The training will cover strengthening the management, technical, and financial skills to efficiently implement, operate, and maintain the infrastructure facilities.

19. During the preparation of the feasibility studies, the experience of, and lessons from similar WSS projects in transition Central Asian republics will be reviewed. The feasibility studies will also review scope for private sector participation in the project components, and will recommend the most appropriate options.

C. Cost Estimates and Financing Plan

20. The total cost of the TA is estimated at \$925,000 equivalent, of which \$631,000 is the foreign exchange cost and \$294,000 equivalent the local currency cost. ADB will provide \$740,000 equivalent to cover the entire foreign exchange cost and \$109,000 equivalent of the local currency cost. The TA will be financed by ADB on a grant basis from the Japan Special Fund, funded by the Government of Japan. The Government will provide the balance of the local currency cost, equivalent to \$185,000 for counterpart staff, office space, administrative support, and logistics. The Government has been advised that approval of the TA does not commit ADB to finance any ensuing project. Details of the cost estimates and financing plan are in Appendix 2.

D. Implementation Arrangements

21. CAC, the Executing Agency for the TA, will undertake the required liaison work with the central and local authorities concerned. CAC will appoint a senior official as a study coordinator to direct the study in cooperation with ADB, and an official from AzerSuKanal to work closely with the TA team. The Government will form a steering committee to direct and coordinate the

⁸ An initial agreement has been reached with KfW to coordinate or possibly cofinance a WSS project in the towns of Sheki and/or Ganja.

⁹ The analysis will be done in accordance with ADB's *Environmental Guidelines for Selected Infrastructure Projects, Environmental Assessment Requirements and Environmental Review Procedures, draft Handbook for Poverty and Social Analysis, Framework for the Economic and Financial Appraisal of Urban Development Sector Projects, Guidelines for the Economic Analysis of Projects, Guidelines for the Economic Analysis of Water Supply Projects, and Handbook for Integrating Poverty Impact in Economic Analysis of Projects.*

study. The committee will be chaired by CAC, and will include representatives of the Department of Foreign Investments and Technical Assistance of the Cabinet of Ministers, Ministry of Finance, Ministry of Economic Development, and officials from city administrations as appropriate.

22. The TA will require about 42 person-months of consulting services, 19 international and 23 domestic. The consulting services will be provided by a consulting firm (the consultant), which will identify domestic consultants upon fielding to the country. The consultant and the domestic consultants will be engaged in accordance with ADB's *Guidelines on the Use of Consultants*. The international consultants will have expertise in WSS engineering, economic and financial analyses, institutional development, social development and community participation, poverty reduction, and environmental impact assessment. The domestic consulting services will cover WSS engineering, institutional development, economic and financial analyses, social development, and community participation. The outline terms of reference for the consultant are in Appendix 3. In view of the need to expedite consultant selection, advance action is being taken to recruit the consultants on a noncommittal basis. ADB's simplified technical proposal approach will be used to select and engage the consultant. In addition to staff participation, the Government will provide an office with utilities and telecommunication access; materials, data, maps, and related documents required by the TA; and field travel of one or two staff members to accompany the consultants. Equipment for TA implementation will be procured in accordance with ADB's *Guidelines for Procurement*. The TA also includes one seminar on the framework and action plan for reform in the WSS sector to be held in Baku and 1-2 workshops on feasibility studies of project components with participation of local authorities and communities.

23. The TA will be carried out over seven months commencing in January 2002 with expected completion by August 2002. The consultants will submit an inception report one month from commencement of the study. Two parts of an interim report, containing the WSS sector review and an action plan, will be submitted within two and four months, respectively, from commencement of the study. A draft final report with a description of the investment project, the proposed capacity-building program, and other findings and recommendations will be submitted within six months from commencement of the study. Three tripartite meetings will be held: the first meeting, upon completion of the sector analysis, to discuss the results of the sector review and to identify project towns for feasibility analysis from the longlist; the second, upon completion of part A, to wrap up the policy dialogue, to agree on the action plan, and to review the project preparation under part B; and the final meeting, to discuss the draft final report. The final report incorporating the comments from the Government and ADB will be completed about two weeks after the last tripartite meeting. The original reports will be in English. A Russian translation of the reports will be prepared by the consultant.

IV. THE PRESIDENT'S DECISION

24. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance, on a grant basis, to the Government of the Republic of Azerbaijan in an amount not exceeding the equivalent of \$740,000, for the purpose of preparing the Urban Water Supply and Sanitation Project, and hereby reports such action to the Board.

TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Targets and Measurable Indicators	Monitoring Mechanism	Risks and Assumptions
Project Goal <ul style="list-style-type: none"> Improve living conditions in secondary towns in Azerbaijan 	<ul style="list-style-type: none"> Increase population coverage with access to safe and reliable water supply and sanitation (WSS) on a sustainable basis in the 2-4 selected urban communities 	<ul style="list-style-type: none"> Conduct reviews and surveys at midterm and at project completion 	<ul style="list-style-type: none"> Country's general economic performance and population's real incomes substantiating willingness to pay for WSS services Willingness of all levels of government to engage in an effective policy dialogue and their commitment to implement reforms
Purpose/Objectives <ul style="list-style-type: none"> Analyze the WSS sector in secondary towns Identify and prepare an investment project for rehabilitation of WSS services and their institutional restructuring in selected towns for possible ADB funding 	<ul style="list-style-type: none"> A sector analysis to better understand the WSS sector's constraints and deficiencies Technical, economic, and financial feasibility studies for an investment project or a group of subprojects 	<ul style="list-style-type: none"> Steering Committee comprising of key government Ministries and ADB TA review missions and consultants' progress reports 	<ul style="list-style-type: none"> Timely provision of and access to data and information Completed restructuring of the public sector and full TA ownership by the Government Support from local authorities and regional utilities Timely PPTA implementation with adequate counterpart support
Outputs <p>Part A</p> <ul style="list-style-type: none"> WSS sector analysis in secondary towns An action plan to mitigate eventual collapse of WSS services and to provide a basis for the sector reform 	<ul style="list-style-type: none"> A review of the sector to include the current technical state of infrastructure, sector's institutional analysis, and financial state of utilities in secondary towns A short- and medium-term reform program to lay down a foundation for the sustainable development of the sector, to include institutional, technical, and financial directions 	<ul style="list-style-type: none"> Inception, interim, and final reports TA review missions 	<ul style="list-style-type: none"> Availability of data; sufficiency of the existing data Commitment by all levels of the Government Willingness of central and local governments to engage in an effective policy dialogue and their commitment to implement reforms, in particular, of the tariff system

(Reference in text: page 1, para 1)

Design Summary	Targets and Measurable Indicators	Monitoring Mechanism	Risks and Assumptions
Part B <ul style="list-style-type: none"> Project and subproject identification and feasibility analysis 	<ul style="list-style-type: none"> Technical, economic, and financial feasibility studies for a project or group of subprojects for possible ADB financing 		<ul style="list-style-type: none"> Adequate engineering and management capacity of <i>Vodokanal</i> enterprises
Activities <ul style="list-style-type: none"> Recruit a team of international and domestic consultants to implement the TA Conduct sector review and carry out feasibility analyses Engage into policy dialogue with the Government and formulate an action plan Coordinate the activities of the TA with various governmental agencies/institutions; organize tripartite meetings 	<ul style="list-style-type: none"> A grant of \$740,000 from the JSF and Government's contribution of \$185,000 equivalent in local currency 42 person-months of consulting services Three tripartite meetings of the Government, TA consultants, and ADB for smooth TA implementation 	<ul style="list-style-type: none"> TA review missions Progress reports by the consultants 	<ul style="list-style-type: none"> Full ownership of the TA by the Government Adequate expertise and capacity of international and domestic consultants Public sector reform initiated by the Government completed, and functions of foreign coordination, delineated

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	500.0	0.0	500.0
ii. Domestic	0.0	45.0	45.0
b. International and Local Travel ^b	50.0	10.0	60.0
c. Reports ^c /Communications	10.0	10.0	20.0
2. Equipment ^d	16.0	0.0	16.0
3. Seminar and Workshops	0.0	5.0	5.0
4. Socioeconomic Surveys	0.0	6.0	6.0
5. Miscellaneous Administration and Support Costs	0.0	5.0	5.0
6. Representatives at Contract Negotiations ^e	10.0	0.0	10.0
7. Contingencies	45.0	28.0	73.0
Subtotal (A)	631.0	109.0	740.0
B. Government Financing			
1. Office Space, Administration, and Support Costs	0.0	50.0	50.0
2. Remuneration of Counterpart Staff	0.0	50.0	50.0
3. Seminars and Workshops	0.0	20.0	20.0
4. Socioeconomic Surveys	0.0	20.0	20.0
5. Contingencies	0.0	45.0	45.0
Subtotal (B)	0.0	185.0	185.0
Total	631.0	294.0	925.0

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

^b Local travel includes air transport and land transport between cities, and may include rental of a vehicle for intercity transportation.

^c Includes translation.

^d Includes two desktop computers, one laptop computer, one laserjet printer, one portable printer, one photocopier, software and accessories, telephones, and a fax machine.

^e Includes cost of travel and per diem for Government observers for contract negotiations at Asian Development Bank headquarters.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE

1. **Part A: Water Supply and Sanitation Sector Analysis in Secondary Towns¹ (4 months).** The main purpose is to provide a comprehensive overview of the water supply and sanitation (WSS) sector in secondary towns in Azerbaijan, and analyze the sector's major constraints and challenges. In particular, the consultant (the international consulting firm) will undertake the following:

- (i) Review the current policy framework guiding the provision of basic infrastructure services, and WSS in the country, and in particular policies affecting secondary towns.
- (ii) Review at national and local government levels the institutional structure responsible for the provision of WSS services. Identify institutional overlaps, inconsistencies, or other such impediments to efficient service delivery.
- (iii) Analyze laws, Government's decrees, and resolutions² relating to the provision of WSS services. Review existing sector studies by the international development community.
- (iv) Assess the availability and quality of water resources outside of the Apsheron peninsula. Identify typical water sources in secondary towns, and estimate the extent of connection to piped water supply.
- (v) Review and assess the actual standards and levels of service provision in secondary towns, and compare with internationally accepted and nationally adopted standards and levels. Investigate and estimate the existing demand for the provision of WSS services in secondary towns. Determine the existing constraints to efficient provision of the demanded level of WSS services, particularly for the poor.
- (vi) Assess the current technical state of WSS infrastructure in secondary towns, including asset quality, efficiency of water production and services, and the degree of technical losses and of unaccounted for water (losses and wastage).
- (vii) Review the current production costs and costs of service delivery in secondary towns. Review the existing arrangements for the operation and maintenance of WSS assets.
- (viii) Review the existing water tariffs structure and identify its deficiencies. Analyze the effective collection rates for various consumer types, including collection in cash and in kind. Assess the ability of the population, and the poor in particular, to respond to the introduction of full and partial cost recovery in WSS services.
- (ix) Review external assistance to the sector, including projects in the pipeline of international lending institutions or bilateral programs for technical or economic assistance.
- (x) In coordination with the ongoing national Poverty Reduction Strategy Program, assess secondary towns from the point of view of access of the poor, including

¹ Secondary towns include all urban centers and towns outside of the Greater Baku area.

² Including National Water Supply and Wastewater Law (1999), and a series of recent laws and regulations on municipalities and municipal property.

internally displaced people (IDP), to safe and reliable water supply and sanitation.

- (xi) Based on the findings of the sector analysis, identify a longlist of priority projects in accordance with the following criteria: (i) urgency in WSS service provision; (ii) maximum impact on poverty reduction; and (iii) commitment of local authorities' to reform the WSS service provision.

2. In the course of the sector analysis, the consultant will also engage in policy dialogue with the Government to prepare a framework/action plan to address the sector's most immediate problems and lay a foundation for its sustainable development. The consultant will undertake the following:

- (i) Identify a framework/action plan necessary to improve the efficiency, accountability, and level of WSS services provision. Recommend a system with clearly delineated functional responsibilities among major stakeholders.
- (ii) Estimate the level of water supply that can be recovered due to a reduction in losses and water wastage, and existing inefficiencies. Analyze investment alternatives for achievement of the demanded level of services. Determine approximate financial implications for consumers and their willingness to pay for the chosen level of service.
- (iii) Determine ways of making the water utilities financially viable and sustainable, including various forms of private sector participation, application of cost recovery principles, metering of services, and improved financial management of water utilities and tariff collection.
- (iv) Discuss and agree on the appropriate principles for pricing WSS services. Recommend a tariff system that is in line with such principles.
- (v) Recommend and develop an appropriate mechanism to ensure access to WSS services of the poor groups of the population and IDP, including the use of lifeline tariffs, an appropriate subsidy policy, and/or the use of appropriate low-cost technical solutions.

3. **Part B: Identification of Project and Feasibility Analysis (4.5 months).** Using the results of the work in part A, the consultant will prepare a project proposal that comprises several (2-4) individual components in water supply and/or sanitation subsectors in selected secondary towns. This task involves the following:

- (i) **Rationale and project framework.** In consultation with Government and the Asian Development Bank (ADB), screen the longlist of towns developed in part A to identify 2-4 water supply and/or sanitation components in secondary towns for funding. Justify the rationale for the project proposal on such grounds as demand trends, supply constraints, efficiency savings, and impact on poverty, among others. Prepare a project framework.
- (ii) **Objectives.** Describe the overall project objectives with due consideration to benefits and costs of the investments, sustainability of WSS services, and assistance to the poor, including IDP.
- (iii) **Scope.** Identify components of the project. Prepare details of each of the components. Develop a set of targets in terms of the likely overall numbers of beneficiaries, the proportion of those falling below the poverty threshold, and the cost recovery achievable.

- (iv) **Technical justification.** Explain the need for the proposed technology and compare the merits of the alternative technical solutions. Describe and review the project components, considering the following:
 - (a) selection criteria including technical, economic, and financial feasibility; social analysis and community participation; and environmental feasibility with reference to national, recommended, and ADB requirements;
 - (b) adequacy of existing and potential potable water sources in the selected towns for meeting water demand for the next 15-20 years;
 - (c) present consumption figures for potable water by referring to water balances from data surveys, and demanded levels and quality of service for WSS in a project town based on the results of community participation and surveys; and
 - (d) adequacy of the proposed technical solution to the demanded level of service; determine the potential benefits accruing from changes in technology; and existing sanitation arrangements (sewerage, wastewater treatment).
- (v) **Cost estimates.** Prepare detailed cost estimates—foreign exchange and local currency cost components—for each project component and the project as a whole, including
 - (a) total cost and estimated per capita investment cost per component and per subsector; and
 - (b) separate estimates for each component, according to ADB standards.
- (vi) **Financing plan.** The consultant will specify the foreign exchange and local currency costs to be financed by ADB, the central Government, the local governments, and other agencies or beneficiaries, if applicable. The consultant will also prepare a detailed plan for possible cofinancing of some components with Kreditanstalt für Wiederaufbau. Project formulation will pay careful attention to the financing capacity of the central and local governments, including analysis of cost recovery and fiscal implications for local governments. The proposed financing plan should be fully discussed with, and accepted by, the Government.
- (vii) **Executing and implementing agencies.** Review the past records of the agencies in project implementation and their institutional capacity, including financial management, accounting and auditing capabilities, to implement a project. Recommend necessary changes/improvements for the efficient implementation and supervision of the project. Prepare a financial evaluation of the participating local governments.
- (viii) **Implementation arrangements.** The following must be described:
 - (a) the organizational arrangements envisaged to implement the project components; details regarding agencies and persons responsible for preparing socioeconomic surveys, design, tendering and construction, supervision, and capacity building; participatory approaches, including the roles of nongovernment organizations and beneficiary groups;
 - (b) the executing and implementing agencies, as well as a project steering committee, a project monitoring unit, and project implementation unit(s); their respective roles and responsibilities;

- (c) budgetary support, channeling of funds, and relending policies if applicable;
 - (d) implementation schedule for each identified component;
 - (e) features related to project implementation: procurement (including provision for international competitive bidding, local competitive bidding, and international shopping); consulting services (scope, terms of reference, person-months, and costs); disbursement policies; reports, accounts, and audit (including project completion report); and
 - (f) measures to ensure sustainability of operation and maintenance of WSS assets, cost recovery, the corresponding tariff structure, and periodic tariff reviews.
- (ix) **Social and environmental measures.** The following will be addressed:
- (a) For the social analysis, assess the project's socioeconomic benefits. Design and undertake a socioeconomic survey in representative areas to identify key constraints to, and related economic costs of, access of the poor to potable WSS services. Prepare a socioeconomic profile of the target population, including an assessment of its requirements and preferences in WSS services, and social customs and practices relevant to the proposed project design, specifically their ability and willingness to pay for the services. Develop and recommend a mechanism and procedures for public consultation and participation in project planning, operation and maintenance, and management, particularly in relation to levels of service performance, tariffs, and environmental protection. The consultants will follow ADB's *Draft Handbook for Poverty and Social Analysis* and *Handbook for Integrating Poverty Impact in Economic Analysis of Projects*.
 - (b) Prepare a poverty impact assessment and a poverty distribution analysis in accordance with ADB's guidelines (explain the poverty definition used, estimate the number of poor beneficiaries, describe the poverty intervention features of the project, calculate a poverty impact ratio, and determine whether the project could be classified as a core poverty intervention).
 - (c) For the environment, prepare an initial environmental examination or environmental impact assessment, if warranted, for each component, and summaries for the whole project, in accordance with ADB's *Environmental Guidelines for Selected Infrastructure Development Projects* and *Environmental Assessment Requirements and Environmental Review Procedures*. The assessments will address the impacts of the project on water supply and sanitation during project implementation and construction, and during subsequent operation. The summary initial environmental examination should note the capacity of the involved institutions to address environmental issues, and recommended institutional strengthening where necessary.
- (x) **Project performance monitoring and evaluation.** Prepare an effective project performance monitoring system that includes monitoring of the project's benefits and impact on poverty reduction. Propose a system of annual operation plans

with counterpart funds allocations for timely project implementation, and project reviews by the Government and ADB.

- (xi) **Private sector participation.** Review the experience of, and lessons from, private sector involvement in basic infrastructure services, and WSS in particular, in the Central Asian republics. Recommend the most suitable options for private sector participation or public-private partnership, for the project components, if appropriate, as well as the corresponding legal, institutional, and other changes to ensure implementability of the private sector involvement.
- (xii) **Capacity building/training.** The consultant will review and assess the existing institutional capacity of the central and local government departments, committees, and agencies responsible for the delivery of social infrastructure. Based on this, assess the need for and a possibility of an advisory technical assistance program. If needed and feasible, design and prepare the technical assistance program and corresponding terms of reference to include training of managers and staff of the departments responsible for service delivery.
- (xiii) **Project justification.** The consultant will undertake these tasks:
 - (a) Conduct a comprehensive economic and financial analyses for each proposed project component and the overall project, using ADB's *Framework for the Economic and Financial Appraisal of Projects*, *Guidelines for the Economic Analysis of Water Supply Projects*, *Framework for the Economic and Financial Appraisal of Urban Development Sector Projects*, *Guidelines for Preparation and Presentation of Financial Analysis*, and *Handbook for Integrating Poverty Impact in Economic Analysis of Projects*.
 - (b) Estimate the incremental revenue and operation and maintenance costs for each project component over a 10-year period after commissioning of the project facilities.
 - (c) Compute, for past and projected financial statements, relevant financial indicators, including a self-financing ratio, debt-service coverage ratio, and operating ratio.
 - (d) On the basis of the capital investment costs, incremental revenue, and operation and maintenance costs, compute for each component and the overall project financial internal rates of return, weighted average cost of capital, and economic internal rates of return. If necessary, calculate increases in consumer charges and tariffs or other measures to achieve reasonable financial and economic internal rates of return. Carry out an affordability analysis.
 - (e) Justify the project from the point of view of social dimensions (social impact, impact on poverty, and gender and development) and environment.
 - (f) Identify project risks and discuss the ways to adequately address them.