

Environmental Assessment Report

Environmental Assessment Review Framework
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Uzbekistan: Water Supply and Sanitation Services

Prepared by Uzbekistan Communal Services Agency of the Republic of Uzbekistan for the Asian Development Bank (ADB).

The environmental assessment report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, management, or staff, and may be preliminary in nature.

ABBREVIATIONS

ADB	–	Asian Development Bank
CMU	–	Contracts Monitoring Unit
EA	–	Executing Agency (EA)
EARF	–	Environmental Assessment and Review Framework
ECA	–	Environmental Consequences Assessment
EIS	–	Environmental Impact Statement
EMP	–	Environmental Management Plan
FTP	–	First tranche project
GOU	–	Government of Uzbekistan
IEA	–	Initial environmental assessment
IEE	–	Initial environmental examination
IRTM	–	Inter- regional trunk main
lpcd	–	liters per capita per day
MFF	–	Multitranches Financing Facility
MOF	–	Ministry of Finance
PD	–	Project Director
PIU	–	Project Implementation Unit
PPMU	–	Program Preparation and Management Unit
PPP	–	Public Private Partnerships
UCSA	–	Uzbekistan Communal Services Agency
WSSP	–	Water supply and sanitation project
WSSSIP	–	Water Supply and Sanitation Services Improvement Investment Program
WWTP	–	waste water treatment plant

GLOSSARY

Glavgoexpertisa	–	Directorate for State Ecological Expertise
Goskompriroda	–	State Committee for Nature Protection
Glavgoexpertisa	–	Directorate for State Ecological Expertise
Oblkompriroda	–	National Protection Committee
Rayon	–	district
Vodokanals	–	water supply and sanitation agency

NOTE

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

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

CONTENTS

	Page
I. INTRODUCTION	1
II. OVERVIEW OF THE SUB-PROJECT COMPONENTS	1
III. COUNTRY'S ENVIRONMENTAL ASSESSMENT AND REVIEW PROCEDURES	2
IV. ENVIRONMENTAL PROCEDURES FOR SUBPROJECTS	4
A. Responsibilities and Authorities	4
B. Environmental Criteria for Subproject Selection	7
C. Procedures for Environmental Assessment of Subprojects	8
D. Compliance of WSSP with ADB's Environmental Guidelines	8
E. Staffing Requirements and Budget	9

I. INTRODUCTION

1. The First Tranche Project (FTP) under the Multitranche Financing Facility (MFF) for Water Supply and Sanitation Services Improvement Investment Program (WSSSIIP) will be a sector loan financing investment in (i) water supply development, (ii) wastewater management, (iii) sanitation and hygiene, and (iv) institutional strengthening and capacity development. The MFF program aims to improve the quality of life of the population by supporting objectives and output targets set in the National Programmes of Clean Water Supply and Sanitation Strategy, updated annually. Adverse environmental impacts of the physical components of the project are either moderate or negligible and may arise in the project life cycle mainly during implementation and/or during operation phase. Initial environmental examinations (IEEs) were conducted for four sample subprojects of the first tranche of MFF exemplifying the various sub-components.

2. The mandatory requirements applicable to the MFF necessitate the proposed subprojects of the first tranche and the subsequent tranches follow adequate environmental assessment process. To ensure that future components are evaluated in a manner consistent with the requirements of the national environmental agency (State Nature Protection Committee) and the ADB, this Environmental Assessment and Review Framework (EARF) has been prepared. This EARF sets forth the following:

- general principles, selection criteria, procedure of organization of and conducting environmental expert assessment of the project documents under this MFF;
- requirements on the type of project documents and the procedure of submitting thereof for environmental expert assessment; and
- a list of environmentally hazardous types of activities subject to mandatory environmental impact assessment (EIA) on the project approval stage.

II. OVERVIEW OF THE SUB-PROJECT COMPONENTS

3. This First Tranche Project has four components:

- (i) Water Supply Development: the rehabilitation and limited expansion of (a) water sources including boreholes at identified groundwater sources; (b) water transmission facilities; (c) storage and service water tanks; (d) pumping stations, including replacement of inefficient pumping machinery; (e) chlorination facilities; (f) distribution networks; (g) individual metered service connections; and (h) structural improvements in office buildings for each subproject.
- (ii) Wastewater Management: (a) rehabilitation of wastewater treatment plants, or development of least cost wastewater treatment facilities, i.e. lagoons; (b) rehabilitation and expansion of the sewerage networks; and (c) rehabilitation of sewerage pumping stations, including replacement of inefficient pumping machinery.
- (iii) Sanitation and Hygiene: it will provide complementary investment to improved water supply in (a) toilet blocks for a selected number of schools, and (b) hygiene promotion activities in all schools in the subproject areas.
- (iv) Institutional Strengthening and Capacity Development: (a) transaction advisory services—to develop and implement a public-private partnership (PPP) contract for Damkhoja Inter Regional Trunk Main (IRTM) and service contracts for rayon

vodokanals; (b) rayon vodokanal rationalization study—to prepare a plan for rationalization of rayon vodokanals into sustainable entities and outline options for potential future PPPs for the rationalized entities; (c) benchmarking—to improve the information available in the sector, thereby improving accountability, regulation, management decisions and PPP transactions; (d) tariff study—to develop a sustainable full cost recovery tariff regime including cost auditing, which is transparent and equitable. In addition, the component will also provide capacity development support in the following areas: (i) Uzbekistan Communal Services Agency (UCSA)—to improve technical capacity and create and train the Contracts Monitoring Unit (CMU), which will regulate the PPP and service contracts; (ii) Ministry of Finance (MOF)—to assist it in implementing the recommendations of the tariff study; and (iii) vodokanals—to train vodokanal staff.

III. COUNTRY'S ENVIRONMENTAL ASSESSMENT AND REVIEW PROCEDURES

4. The water supply and wastewater management system components shall go through the environmental requirements of the Government of Uzbekistan (GOU). The Uzbekistan law on Nature Protection established in 1992 outlines the legal and institutional requirements for the conservation of the environment and the rational use of natural resources. The law empowers the State Committee for Nature Protection—Goskompriroda as the agency responsible for implementing the law. In addition, environmental requirements prescribed by the following legal acts of the Republic of Uzbekistan shall be complied with: the Law on Water and Water Use (1993), the Cabinet of Ministers Resolution No. 385 of 3 August 1993 on Approval of "Temporal Procedure for Limited Water Use in the Republic of Uzbekistan", the Cabinet of Ministers Resolution No. 174 of 7 April 1992 "Regulation on Water Protection Zones of Water Reservoirs and other Water Basins, Rivers, Trunk Canals and Collectors as well as Sources of Drinking, Household and Spa Water Supply".

5. According to the above GOU regulatory documents, preparation of the review reports and approval of projects on environmental grounds is regulated by the Resolution of the Cabinet of Ministers No 491 of 31 December 2001, On Approval of the Regulation of the State Environmental Expertise. This regulation stipulates four categories of projects. According to Annex 1 of this regulation, the intended subprojects under the FTP may be ranked as Category II and III projects. Category II projects (including inter-regional ground water intakes, national and inter-regional trunk mains, wastewater treatment plants involving water supply or wastewater handling at a capacity from 50,000 to 280,000 m³/day) require all the three stages of the environmental assessment.

6. For Category II projects, the EIA procedure consists of the following stages:

- Stage 1. Draft Environmental Impact Statement (EIS);
- Stage 2. Environmental Impact Statement ; and
- Stage 3. Statement on Environmental Consequences.

7. Upon review of the draft EIS Goskompriroda decides, based on the need to justify the cost of environmental safety measures, whether an EIS has to be developed.

8. For Category III projects (wastewater treatment facilities involving wastewater handling at a capacity less than 50,000 m³/day, regional underground water intakes) an EIS is not produced, while the Stage 3 is conducted only if the project would generate emissions, discharges, and waste. Draft EISs of Category I–III projects include the following:

- (i) assessment of existing environmental conditions;

- (ii) assessment of social and economic conditions;
- (iii) analysis of environmental impacts and identification of sources of impact and pollution;
- (iv) analysis of type and character of impact;
- (v) assessment of the alternatives;
- (vi) analysis of emergency risk, probability of occurrence and emergency containment measures;
- (vii) preparation of an EMP;
- (viii) public consultation; and
- (ix) monitoring changes in environment during project construction and operation.

9. Category II projects are approved by Glavgosexpertisa, the Goskompriroda's authority responsible for state environmental expert assessment (expertisa). In accordance with the abovementioned Resolution, Goskompriroda's state environmental assessment bodies, depending on the specifics and complexity of a project under review, may hire individual experts or groups of experts and researchers, as well as foreign experts, if necessary, to develop recommendations for an Environmental Expert Assessment. The Provincial Directorate for State Ecological Expertise (Gosecoexpertisa) under the Provincial National Protection Committee (Oblkompriroda) approves Category III projects. However, after considering the EIA report they may request an Environmental Consequences Assessment (ECA) to be carried out before the project commences operation. The ECA establishes the maximum allowed emissions of pollutants and the standards that will be required to be adopted by the project to ensure that the project operates within acceptable environmental parameters. The ECA stipulates the following:

- (i) maximum allowed amount of air pollution;
- (ii) maximum allowed amount of surface water pollution (O'zRH 84.3:2004 Methodological Guidance on Fixing Limits of Pollutant Discharges in Water Bodies and Terrain Taking into Account Technically Achievable Wastewater Treatment Indicators);
- (iii) maximum allowed amount of wastes (RD 118.00277714.25-02 Nature Protection. Procedure of State Environmental Control of Household Solid Waste Landfills);
- (iv) list of environmental actions which will be required to be followed by the project to meet existing regulations on impact on the environment; and
- (v) general conclusions about possibility of project implementation.

10. Category III projects do not require any environmental work beyond IEA (which is very similar to IEE) and if specified by approving agencies also ECA. The assessment of them is an exclusively provincial jurisdiction by the National Protection Committee with no Central National Protection Committee involvement.

11. In addition to the above environmental requirements, the implementation of subprojects shall comply with the following norms legally stipulated in the country:

- (i) KMK (CNR) 2.04.03.97 Sewerage. Outside networks and Structures. Tashkent 1997;
- (ii) KMK (CNR) 2.04.02. 97 Water Supply. Outside networks and Structures, Tashkent 1997;
- (iii) ShNK 4 (CNR) 4.02.04-04 Wells 4 Manual. Tashkent 2005;
- (iv) Rules of Using Water Supply and Sewerage Systems in the Republic of Uzbekistan, Ministry of Utilities of the Republic of Uzbekistan, 1994;
- (v) Land protection activities stipulated in Construction Norms and Regulations (CNR or *SNiP*) 3.01.01-97 and CNR 3.05.03-97;

- (vi) Anti-seismic activities in accordance with CNR 2.01.03-96 “Civil Works within the seismic areas; and
- (vii) Construction Norms and Regulations 2.01.03-96 and 3.04.02-97 “Corrosion Protection of buildings” to prevent effects on the quality of ground water.

12. In case of water supply, the GOU standards for water quality shall be complied by selection of water sources and treatment facilities to produce water complying with the following standards:

- (i) O’zDSt 950:2000 Potable Water. Hygienic Requirements and Quality Control;
- (ii) O’zDSt 951:2000 Sources of Centralized Water Supply. Hygienic Requirements and Selection Rules; and
- (iii) SanPiN of the Republic of Uzbekistan No 0211-06 Hygienic Criteria and Water Quality Control in Centralized Water Supply Systems.

13. Maximum allowable concentrations of major pollutants in wastewater are regulated by Rules of Industrial Wastewater Admission to Urban Sewerage Systems. The degree of wastewater treatment shall comply with SanPiN No 0056-96 Sanitary Rules and Norms of Surface Water Protection and Rules for Protection of Surface Water from Wastewater Contamination requirements, approved by the Goskompriroda.

14. Water supply and sewerage systems should be designed taking into account the outcome of the relevant environmental impact assessment and should be guided by RD 118.027.714.24-93 Instruction on Environmental Impact Assessment Procedure during Site Selection, Development of Feasibility Study and Designs of Economic Facilities and Complexes, developed and approved by the Goskompriroda.

IV. ENVIRONMENTAL PROCEDURES FOR SUBPROJECTS

A. Responsibilities and Authorities

15. **Executing Agency (EA).** The Uzbekistan Communal Services Agency (UCSA) will be the EA responsible for the overall technical supervision and execution of the Project. Each participating provincial government will be the implementation agency (IA) for the investment program and individual subprojects therein.

16. **Program Preparation and Management Unit (PPMU).** Within the UCSA, the PPMU will be set-up to be headed by a full-time Program Director (PD). The PPMU will be comprised of five units: (i) Technical Unit, (ii) Financial Units, (iii) Procurement Unit, (iv) Social and Environment Unit, and (v), Administration Unit. The Social and Environment Unit will be staffed, *inter alia*, with one Environment Specialist. The PPMU will conduct subproject screening, classification, information disclosure and consultation with project-affected people. It will also incorporate all consulting services under the project, including assistance to the provinces and will oversee the conduct of feasibility studies (including IEEs/IEAs) by project consultants.

17. Responsibility for fulfilling environmental requirements of GOU (for the water supply and wastewater management systems) and conducting the required level of environmental assessment consistent with the ADB guidelines lies with the Borrower’s PPMU. The project consultants will assist the PPMU in this regard. For environment category B projects, the IEE and SIEE reports prepared by PPMU will be reviewed by an Environmental Specialist within the EA based on ADB’s *Environment Policy* (2002) and *Environmental Guidelines* (2003). ADB will

review and approve IEE/SIEE¹ reports for the WSS subproject for tranche 1 and for future MFF tranches. The PPMU will seek approval of the IEE by the concerned government authority.

18. Mitigation measures that are incorporated into the design will be overseen by the PPMU before providing technical approvals. Mitigation measures that form part of the bidding and contract documents will also be verified by PPMU before getting the contract signed between PIU and Contractor.

19. **Project Implementation Unit (PIU).** Each participating Province Government will be an Implementation Agency for the WSSSIIP and subprojects being implemented on its territory. In each participating province, a PIU will be established and will be responsible for subproject day-to-day implementation on the local level. Each PIU will be comprised of four units: (i) Technical Unit, (ii) Financial Units, (iii) Social and Environment Unit, and (iv), Administration Unit. The Social and Environment Unit will be staffed, *inter alia*, with one Environment Specialist. The PIU will be located within the Provincial Governor's office and assisted by project consultants.

20. The responsibilities of the PIUs shall include (i) carrying out detailed surveys, investigations and engineering designs of infrastructure components (water supply and sewage); (ii) tendering, evaluating bids and awarding works, contract administration, supervision and quality control; (iii) measuring works carried out by the contractors and certifying payments; (iv) conducting public awareness campaigns and participation programs, (v) updating the EMP prepared during the IEE at the feasibility stage; and (vi) preparing monthly reports. The project consultants will assist the PIUs in all the aforesaid activities.

21. The mitigation measures identified in the IEE will be implemented during design, construction, and operation. Environmental controls pertaining to design and location will be incorporated into the detailed design by the project consultants. Mitigation measures during construction stage shall form part of the Bidding and Contract Documents and will be implemented by the contractor.

22. During implementation, monitoring of the implementation of mitigation measures set out in the EMP is the main responsibility of the PIU to be assisted by project consultants. The monthly progress reports prepared by PIUs, which will be sent to PPMU for review, will include a section on implementation of mitigation measures. Annual reports on implementation of the Environmental Management Plans (EMPs) including compliance with loan covenants for each of the subprojects / projects will be submitted to the ADB for environment category B subprojects.

23. During the operation stage of the project, the responsibility of monitoring environmental performance of project components is delegated to the PIA (through their respective WSS Sections). Environmental specialists from the Nature Protection Committee and the Sanitation & Epidemiological Services will conduct periodic monitoring consistent with their mandates.

24. Table 1 summarizes the roles and responsibilities of the institutions in conducting environmental assessments and implementing the EMP of WSS.

¹ From Tranche 2 on, SIEEs will not be required, per ADB's Safeguard Policy Statement that will become effective 20 January 2010.

Table 1: Institutional Roles and Responsibilities

PIU	PPMU	ADB
A. Pre-Construction Phase		
	<p>With assistance from project consultants, the PPMU fulfills the ADB requirements and:</p> <ul style="list-style-type: none"> (i) conducts sub-project screening using the sub-project selection criteria and ADB's project classification system; (ii) conducts IEE for Category B Component (water supply/ wastewater Management) with findings, as well as an EMP, included in the IEE report;. (iii) discloses environment-related information to and consults people likely to be affected by the project at the early stage of IEE preparation in accordance with the <i>Public Communications Policy (2005)</i>.with findings included in the IEE report; and (iv) fulfills GOU requirements as follows: <ul style="list-style-type: none"> – for all water supply and wastewater management subprojects, prepares Initial Environmental Assessment Reports for clearance from concerned government authority, and secures other government permits and approvals; – submits IEE report to ADB for review and approval, makes the report available to the public, and on request, makes the IEE available to interested parties; – ensures that mitigation measures specified in the EMP, as well as national standards, are incorporated in the project design; and – with the assistance of project consultants, identifies and incorporates environmental mitigation and monitoring measures into bidding and contract documents. 	<p>Reviews sub-project screening results and ratifies inclusion as category "B" sub-projects.</p> <p>Approves IEE on no objection basis unless any problem is identified</p>
B. Construction Phase		
<p>Undertakes the following tasks with the assistance from project consultants:</p> <ul style="list-style-type: none"> – monitors the implementation of mitigation measures by contractor. – prepares monthly progress reports including a section on implementation of the mitigation measures and submits to PMU for review. 	<ul style="list-style-type: none"> (i) Reviews progress reports to ensure that all mitigation measures are properly implemented; and (ii) Consolidates monthly reports and submits quarterly reports to ADB for review and every 6 months, prepares progress reports on the implementation of the subproject and EMPs and compliance with government and ADB environmental requirements, and submits them to ADB for review. 	<p>Reviews semi-annual reports and provides necessary advice to the PIU through PPMU.</p>
C. Operation Phase		
<p>Conducts monitoring, as specified in the EMP for water supply and wastewater components consistent with the mitigation measures.</p> <p>Environmental specialists from concerned government agencies conduct periodic monitoring consistent with their mandate.</p>	<p>Every 6 months, prepares progress reports on environmental performance and submits them to ADB for review.</p>	<p>Reviews semi-annual reports and provides necessary advice to the PIU through PPMU.</p>

B. Environmental Criteria for Subproject Selection

25. None of the components are expected to have significant negative environmental impacts, which are mainly attributed (i) to the nature of components, which will primarily improve the environmental condition; and (ii) absence of notably sensitive environmental features in any of the subproject location, which will be affected by proposed components. In addition, fulfilling the GOU requirements will ensure environmental safeguard for the water supply schemes and wastewater management which are within the purview of the Environmental Assessment system and regulation for control, however, the selection criteria indicated in Table 2 should be followed while identifying and finalizing subproject components.

Table 2: Environmental Criteria for Sub-project Component Selection

Component	Criteria
Overall selection criteria	<ul style="list-style-type: none"> • Include only environmental category B and C sub-projects in the MFF • Select sites resulting in minimum or no resettlement and/or relocation • Do not disturb protected areas, pristine ecosystems, and historical and cultural places/values. • Avoid conversion of prime agriculture areas into subproject components as much as possible.
Water Supply System (water source and other facilities including distribution network)	<ul style="list-style-type: none"> • Avoid water use conflicts • Do not locate adjacent to or within cultural heritage sites, protected areas, wetlands, mangrove areas, estuarine zones, and special areas for protecting biodiversity • Do not locate in areas prone to raw water pollution from upstream wastewater discharge from communities, industries, and agricultural and soil erosion runoff. • Do not impair historical/cultural monuments/areas • Avoid excessive groundwater extraction leading to salt water intrusion or land subsidence • Avoid excessive abstraction of surface water affecting downstream water users • Do not cause social conflicts • Ensure no conflicts in abstraction of raw water for water supply with other beneficial water uses for surface and ground water resources • Avoid unsatisfactory raw water supply, such as excessive pathogens or mineral constituents (salinity), high aluminum, manganese, fluoride, iron, etc. • Ensure adequate protection of wells to prevent pollution of water supply • Ensure adequate buffer around treatment plants and pumping stations to alleviate the effect of noise and other possible nuisances • Avoid densely populated areas • Ensure safe handling of chlorine • Ensure delivery of safe water • Avoid inadequate/poor treatment and insufficient chlorination • Ensure proper and adequate treatment and disposal of sludge
Wastewater Management (sewage collection system and WWTP)	<ul style="list-style-type: none"> • Do not cause emission of foul odor, noise, and proliferation of insects and rodents in residential areas and public places • Avoid overflows and flooding of neighboring properties with

Component	Criteria
	<p>raw sewage or effluents</p> <ul style="list-style-type: none"> • Ensure no environmental pollution due to improper sludge disposal or inadequately treated effluents • Ensure no groundwater and soil pollution from raw sewage • Avoid impairment of water quality of effluent-receiving water bodies for their intended uses • Capacities shall match wastewater generated from projected population and improved water supply systems • Ensure that all facilities will be accessible for maintenance • Ensure that no hazardous industrial effluents are connected to sewage collection systems to adversely impact the water quality of receiving water bodies • Ensure that adequate measures will be available to control solid waste dumping into sewers

C. Procedures for Environmental Assessment of Subprojects

26. Based on the above criteria, components identified will ensure that the subproject does not result in any potential environmental impacts, which would be classified as environment category. As established in the IEE of subprojects, most of the impacts are of typical construction and operation nature, which can be mitigated by appropriate mitigation measures. All subprojects can be categorized as either 'B' or 'C' and do not warrant an EIA study.

27. In addition to the GOU requirements, each subproject under the WSSP shall comply ADB's *Environment Policy (2002)* mandates the consideration of all environment aspects of ADB operations. The Environment Policy and Operations Manual (OM) F1: *Environmental Considerations in ADB Operations* provide the environmental procedures and assessment requirements.

28. SIEE/IEE reports maybe disclosed on the ADB web site². The EE with EMP reports are also made available to interested parties upon request.

29. Following are the components of the IEE in line with ADB's *Environmental Assessment Guidelines (2003)*.

- I. Introduction
- II. Description of the Project
- III. Description of the Environment
- IV. Screening of Potential Environmental Impacts and Mitigation Measures
- V. Institutional Requirements and Environmental Monitoring Plan
- VI. Public Consultation and Information Disclosure
- VII. Findings and Recommendation
- VIII. Conclusions

D. Compliance of WSSP with ADB's Environmental Guidelines

30. The environmental assessment and review procedures developed in the above sections are based on the applicable provisions of the Decree of the Cabinet of Ministers No 491 dated 31 December 2001, Approval of the Regulation of the State Environmental Expertise of GOU, and the ADB's *Environment Policy (2002)* and *Environmental Assessment Guidelines (2003)*. The framework clearly specifies the procedures to be followed for each component consistent

² From Tranche 2 on, SIEEs will not be required, per ADB's Safeguard Policy Statement that will become effective 20 January 2010.

with ADB and GOU requirements. According to the criteria set forth in this EARF, only category 'B' subproject will be allowed.

E. Staffing Requirements and Budget

31. Conducting the environmental assessment as laid out in the earlier sections is the responsibility of the PPMU. The project consultants to be appointed for a WSSP by the PPMU shall prepare IEE and SIEE based on ADB guidelines. It is estimated that a time frame of 30 days is sufficient to prepare IEE/SIEE reports. The budget allocation for each IEE using local expertise is estimated at US\$3,000. The public consultation and information disclosure shall be conducted by the PPMU through project consultants.

32. During the implementation stage, the PPMU will require the services of project consultants to inspect the implementation of mitigation and monitoring measures in accordance with the EMP.