



# Report and Recommendation of the President to the Board of Directors

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Project Number: 51034-002  
March 2020

## Proposed Loan Republic of Uzbekistan: Sustainable Solid-Waste Management Project

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Asian Development Bank



## **CURRENCY EQUIVALENTS**

(as of 2 March 2020)

Currency unit	–	sum (SUM)
SUM1.00	=	\$0.00010496
\$1.00	=	SUM9,527.20

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
EMP	–	environmental management plan
EMR	–	environmental monitoring report
GPS	–	global positioning system
IEE	–	initial environmental examination
MSW	–	municipal solid waste
O&M	–	operation and maintenance
PAM	–	project administration manual
PMU	–	project management unit
PPP	–	public–private partnership
SCEEP	–	State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection
SWM	–	solid-waste management

## **NOTE**

In this report, "\$" refers to United States dollars unless otherwise stated.

<b>Vice-President</b>	Shixin Chen, Operations 1
<b>Director General</b>	Werner Liepach, Central and West Asia Department (CWRD)
<b>Director</b>	Yong Ye, Urban Development and Water Division (CWUW), CWRD
<b>Team leader</b>	Ruoyu Hu, Urban Development Specialist, CWUW, CWRD
<b>Team members</b>	Minhong Fan; Senior Procurement Specialist; Procurement Division 1; Procurement, Portfolio, and Financial Management Department Feruzha Insavaliyeva, Associate Safeguards Officer, Uzbekistan Resident Mission (URM), CWRD Shinsuke Kawazu, Principal Counsel, Office of the General Counsel Mekhri Khudayberdiyeva, Senior Social Development Officer (Gender), URM, CWRD Sunghoon Kris Moon, Urban Development Specialist, Sector Advisory Service Cluster–Urban, Sustainable Development and Climate Change Department Doniyor Mukhammadaliyev, Social Sector Officer, URM, CWRD Jose Tiburcio Nicolas; Senior Social Development Specialist (Safeguards); Portfolio, Results, Safeguards and Gender Unit (CWOD-PSG); CWRD Diep N. Pham, Senior Portfolio Management Specialist, Energy Division, South Asia Department (SARD) Mary Alice Rosero, Social Development Specialist (Gender and Development), CWOD-PSG, CWRD Syed Asim Ali Sabzwari, Environment Specialist, CWOD-PSG, CWRD Charles Felix S. Simbillo, Operations Analyst, CWUW, CWRD Annalyn Almodiel-Toledo, Operations Assistant, CWUW, CWRD
<b>Peer reviewer</b>	Pushkar Srivastava, Senior Project Officer (Urban), India Resident Mission, SARD

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## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number: 51034-002</b>	
<b>Project Name</b>	Sustainable Solid-Waste Management Project	<b>Department/Division</b>	CWRD/CWUW
<b>Country</b>	Uzbekistan	<b>Executing Agency</b>	State Committee for Ecology and Environmental Protection (formerly State Committee for Nature Protection)
<b>Borrower</b>	Uzbekistan		
<b>Country Economic Indicators</b>	<a href="https://www.adb.org/Documents/LinkedDocs/?id=51034-002-CEI">https://www.adb.org/Documents/LinkedDocs/?id=51034-002-CEI</a>		
<b>Portfolio at a Glance</b>	<a href="https://www.adb.org/Documents/LinkedDocs/?id=51034-002-PortAtaGlance">https://www.adb.org/Documents/LinkedDocs/?id=51034-002-PortAtaGlance</a>		
<b>2. Sector</b>	<b>Subsector(s)</b>	<b>ADB Financing (\$ million)</b>	
✓ <b>Water and other urban infrastructure and services</b>	Urban policy, institutional and capacity development		20.00
	Urban solid waste management		40.00
		<b>Total</b>	<b>60.00</b>
<b>3. Operational Priorities</b>		<b>Climate Change Information</b>	
✓ Addressing remaining poverty and reducing inequalities		CO <sub>2</sub> reduction (tons per annum)	6
✓ Accelerating progress in gender equality		Climate Change impact on the Project	Low
✓ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability			
✓ Making cities more livable		<b>ADB Financing</b>	
✓ Strengthening governance and institutional capacity		Mitigation (\$ million)	2.22
<b>Sustainable Development Goals</b>		<b>Gender Equity and Mainstreaming</b>	
SDG 5.c		Effective gender mainstreaming (EGM)	✓
SDG 11.6, 11.a			
SDG 12.4		<b>Poverty Targeting</b>	
SDG 13.a		General Intervention on Poverty	✓
<b>4. Risk Categorization:</b>	Low		
<b>5. Safeguard Categorization</b>	Environment: B Involuntary Resettlement: C Indigenous Peoples: C		
<b>6. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>60.00</b>	
Sovereign Project (Regular Loan): Ordinary capital resources		60.00	
<b>Cofinancing</b>		<b>0.00</b>	
None		0.00	
<b>Counterpart</b>		<b>52.00</b>	
Government		52.00	
<b>Total</b>		<b>112.00</b>	
<b>Currency of ADB Financing: US Dollar</b>			



## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the Republic of Uzbekistan for the Sustainable Solid-Waste Management Project.<sup>1</sup>

2. The project will take a holistic approach to improve solid-waste management (SWM) services nationwide, and strengthen sector performance and environmental sustainability by (i) upgrading SWM collection systems, (ii) building institutional capacity, (iii) strengthening the SWM regulatory framework, (iv) enhancing public awareness, and (v) improving environmental monitoring capacity.<sup>2</sup>

## II. THE PROJECT

### A. Rationale

3. **National context.** Uzbekistan is one of the most dynamic economies in Central Asia, achieving a consistent annual growth rate of 4%–8% during 2005–2018.<sup>3</sup> Since independence in 1991, a gradual transition to a market-based economy has characterized growth in Uzbekistan.<sup>4</sup> Since 2016, the Government of Uzbekistan has intensified structural transformations, with a focus on increasing industrialization and economic diversification, attracting foreign direct investment, and balancing urban and rural development. Strategic investments in infrastructure, including SWM, are therefore an essential part of the government's economic growth strategy.<sup>5</sup>

4. **Sector performance and issues.** The Ministry of Communal Services was responsible for the collection, transport, and disposal of municipal solid waste (MSW)<sup>6</sup> until its dissolution in 2001. Since then, the responsibility for SWM provision has been transferred to departments of municipal governments (*hokimiyats*) that were responsible for landscaping and territorial improvements, including in rural areas.<sup>7</sup> However, these entities suffered from severe performance issues and accountability, cost recovery, low tariff and capacity deficiencies, resulting in widespread systemic collapse of the nation's SWM system. By 2014, only 20% of MSW was even collected across the country, with collection largely restricted to in and around Tashkent, the nation's capital. MSW is generally disposed of in open dump sites, with virtually no environmental protection measures. There is limited recycling, and public awareness is low. As it is estimated that Uzbekistan generated more than 4 million tons of MSW in 2014, and this is expected to grow to 6.6 million tons by 2035, cumulatively generating more than 100 million tons, significant investments are needed in the SWM system to meet the growing demands.

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<sup>1</sup> The design and monitoring framework is in Appendix 1.

<sup>2</sup> Asian Development Bank (ADB). 2019. *Technical Assistance to the Republic of Uzbekistan for Sustainable Solid-Waste Management Project*. Manila.

<sup>3</sup> The growth rate was 6.2% in 2016, 4.5% in 2017, and 5.1% in 2018, with forecasts of 5.8% for 2019 and 6.0% for 2020. ADB. 2019. *Uzbekistan: Economy*. Tashkent (accessed 17 February 2020).

<sup>4</sup> Government of Uzbekistan. 2017. *Presidential Decree No. 4947. On Strategy of Actions for Further Development of Uzbekistan*. Tashkent.

<sup>5</sup> Republic of Uzbekistan. 2019. [Resolution No. PP-4291 About approval of Strategy according to the treatment of municipal solid waste in the Republic of Uzbekistan for 2019–2028](#). Tashkent.

<sup>6</sup> Municipal solid waste (MSW) is nonhazardous solid waste from residential, commercial, and institutional establishments. It also includes green waste and street sweeping waste. It does not include industrial, hazardous, medical, or other wastes.

<sup>7</sup> Tashkent city was the exception: Tashkent developed its solid-waste management (SWM) system through World Bank funding, later to be rehabilitated through an ADB-funded loan (ADB. 2013. [Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of Uzbekistan for Solid Waste Management Improvement Project](#). Manila (approved October 2013, \$69 million)).

5. **Sector reforms.** Since 2014, the government has responded directly to these challenges by implementing widespread sector reforms, including fostering sector dialogue, reforming policy, enacting legislation, reorganizing and strengthening sector institutions, investing in physical infrastructure, and promoting private sector intervention. Initially, reforms focused on enacting regulations to enhance environmental standards and compliance and improving SWM service provision. The government established 157 district sanitary cleaning units to provide services in rural areas, procured more than 1,400 vehicles and equipment units, and constructed 14,000 MSW community collection points. Private sector participation also increased, both by outsourcing waste collection services in 41 of the nation's 83 cities and towns, and subsequently by establishing public-private partnerships (PPPs) for SWM services in nine large city and urban center 'clusters'.<sup>8</sup>

6. Since 2017, government has accelerated further sector reforms, including the transitioning of nationwide responsibility from the *hokimiyats* to the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection (SCEEP).<sup>9</sup> In parallel, the government also created *Toza hududs* (state unitary enterprises) in the Republic of Karakalpakstan and each of the nation's 12 provinces to improve provincial (urban and rural) SWM services in areas not served by the private sector,<sup>10</sup> and established the Republican Association of Specialized Enterprises for Sanitary Cleaning to promote, coordinate, and monitor *toza hudud* institutional development and capacity building at the national level. Sector monitoring has also improved.<sup>11</sup> As a result of these reforms, by March of 2019, MSW collection coverage has reportedly improved nationwide from less than 20% to about 48% (15.7 million inhabitants), and about 5,000 jobs have been created.<sup>12</sup>

7. **National strategy for solid-waste management.** Assisted by the Asian Development Bank (ADB), the government also formulated a national strategy for SWM in April 2019 (footnote 5). The strategy's overarching objective is to integrate all SWM activities to (i) minimize public health and environmental impacts; (ii) create effective, reliable, and socially acceptable SWM systems; (iii) maximize the reduction, reuse, and recycling of waste; and (iv) promote new technologies and financing mechanism. The strategy includes a detailed action plan with 36 actions to be completed in a phased approach between 2019 and 2028.<sup>13</sup> The actions aim to (i) update the legislative framework; (ii) strengthen the asset and technical base; (iii) improve organizational capacity; (iv) introduce waste segregation and promote recycling; (v) mainstream SWM education, awareness, and advocacy; (vi) update tariffs and improve cost recovery; and (vii) strengthen environmental monitoring and compliance.

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<sup>8</sup> These city and urban center 'clusters' are in the autonomous Republic of Karakalpakstan and the provinces of Andijan, Bukhara, Khorezm, Surkhandayra, Kashkadarya, Navoi, Djizzak, and Syrdarya.

<sup>9</sup> Republic of Uzbekistan. 2017. *Decree of the President of Uzbekistan No. UP-5024*. Tashkent. SCEEP is therefore both the regulator in charge of environmental oversight and control, and the nationwide proponent of most SWM services.

<sup>10</sup> *Toza hududs* are mandated to serve the most difficult operational areas, where haulage distances, remoteness, limited MSW quantities, and consumer inability and unwillingness to pay are most prevalent.

<sup>11</sup> Entities are assigned to strengthen internal and external control systems within the sector's institutional framework: (i) the Provincial Center for Organizing Sanitation Services controls the national SWM billing database, monitors the performance of *toza hududs* and private operators, and handles customer complaints and litigation; and (ii) the Collection Enforcement Agency of the Chief Prosecutor's Office of Uzbekistan collects tariffs.

<sup>12</sup> Including coverage for *toza hudud* (32%), Maxsustrans (4% coverage), Maraqand Obod (1%), and private sector group (11%). Based on SCEEP published report.

<sup>13</sup> Including (i) an initial phase to strengthen the regulatory framework, rationalize and operationalize SWM service delivery institutions, address acute MSW collection deficiencies, and improve dump sites; (ii) a second phase to achieve universal SWM collection coverage, and transit from existing dump sites to modern sanitary landfills; and (iii) a third phase to accelerate waste reduction and recycling initiatives, and incorporate alternative technologies.

8. **Priority needs.** Key areas for support are (i) developing the regulatory framework, (ii) making operational and improving the Republican Association of Specialized Enterprises for Sanitary Cleaning and *toza hududs*, (iii) enhancing environmental monitoring and compliance, and (iv) filling investment gaps for basic SWM collection vehicles and equipment to expand service coverage (currently at 48%).

9. **ADB and development partner support.** ADB has been actively assisting the government to rehabilitate and expand the Tashkent city SWM system, and to formulate the national SWM strategy.<sup>14</sup> Similarly, the Agence Française de Développement is implementing an SWM project in Samarkand city, and the European Bank for Reconstruction and Development is preparing an SWM project to establish sanitary landfills in Karakalpakstan and Horezm. Close coordination is ongoing with the development partners under the guidance of the national SWM strategy. The government has commenced improvement of the MSW disposal systems through upgrading of existing dump sites. Waste-to-energy proposals are being explored to minimize the waste to be disposed of.

10. **Project alignment and lessons learned.** The project is consistent with the ADB country partnership strategy, 2019–2023 for Uzbekistan,<sup>15</sup> and aligns with ADB's Strategy 2030 operational priorities of strengthening governance and institutional capacity, addressing remaining poverty, accelerating progress in gender equality, enhancing environmental sustainability, and creating livable cities.<sup>16</sup> It is included in ADB's country operations business plan, 2020–2022<sup>17</sup> for Uzbekistan. The project prioritizes asset operation and maintenance (O&M), performance-based operations, and cost recovery to improve sustainability. Lessons incorporated in the project design include (i) an inclusive development approach through transparent mechanisms that enable stakeholders to participate and contribute meaningfully as users, enablers, and providers; (ii) streamlined procurement management and additional procurement support to reduce project implementation delays; (iii) quality standards for civil works structures; and (iv) progressively transforming the *toza hududs* to asset managers, enabling and encouraging private sector and civil society for asset operation and service delivery.

## B. Project Description

11. **Proposed project.** The project will assist the government to (i) update the SWM legal framework by developing specific regulatory directives; (ii) build institutional capacity in and improve the sustainability of the Republican Association of Specialized Enterprises for Sanitary Cleaning and *toza hududs*; (iii) develop and mainstream environmental education, awareness, and advocacy; (iv) strengthen *toza hudud* asset bases and improve collection services through the provision of vehicles, equipment, and physical infrastructure; and (v) improve SCEEP's environmental testing capabilities. The project is aligned with the following impact: environment, health, and living conditions improved. The project will have the following outcome: reliable and sustainable SWM services improved and expanded in small urban centers and peri-urban and rural areas nationwide, benefiting at least 6 million people (footnote 1).

<sup>14</sup> ADB. 2013. [Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of Uzbekistan for Solid Waste Management Improvement Project](#). Manila.

<sup>15</sup> ADB. 2019. [Country Partnership Strategy: Uzbekistan, 2019–2023—Supporting Economic Transformation](#). Manila. The project aligns with two of its three strategic areas: supporting private sector development, and reducing economic and social disparities.

<sup>16</sup> ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#). Manila.

<sup>17</sup> ADB. 2019. [Country Operations Business Plan: Uzbekistan, 2020–2022](#). Manila.

12. **Output 1: Solid-waste management subsector regulatory framework enhanced.** This output will assist the government to formulate specific regulatory directives, as identified in the national strategy for SWM. It will (i) enhance SWM operations by establishing waste classification protocols and strengthening waste transportation and disposal site regulations and compliance, (ii) improve public accountability and tariff-setting methodologies, (iii) promote a PPP enabling environment by defining the responsibility between the government and service providers, (iv) promote waste segregation practices, and (v) establish a performance management framework (including key performance indicators) for SWM operations.

13. **Output 2: Republican Association of Specialized Enterprises for Sanitary Cleaning and *toza hudud* capacity strengthened.** This output involves (i) formulating a *toza hudud* business restructure plan to transform these entities into asset managers and demarcating the service zones for provincial SWM operations; (ii) transforming the Republican Association of Specialized Enterprises for Sanitary Cleaning into a technical nexus for public and private SWM operators; (iii) instituting performance-based management, including key performance indicators and performance benchmarking for SWM operations; (iv) upgrading management information systems for asset management, billing, customer relations, and public reporting; (v) strengthening sustainable SWM service delivery through the professional accreditation of key *toza hudud* personnel in SWM utility management, financial management, and O&M efficiency improvement; (vi) optimizing PPP practices by developing standard tender procedures and service contracts; and (vii) promoting public awareness and behavior-change campaigns in reduce, reuse, and recycle principles nationwide.

14. **Output 3: Environmental monitoring capabilities of the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection improved.** This output includes (i) provision of laboratory equipment for SCEEP's provincial laboratories for the on-site testing of disposal sites and other SWM facilities,<sup>18</sup> (ii) provision of six vehicle-based mobile laboratories and related equipment for on-site air, soils, surface water, groundwater, landfill gas and leachate sampling and testing, and (iii) operational training for laboratory personnel.

15. **Output 4: Solid-waste management collection and interim disposal services in small urban centers and peri-urban and rural areas improved nationwide.** This output involves (i) building the functional asset bases of the *toza hududs* by providing 300 collection vehicles (12.0 cubic meter capacity), 6,000 waste disposal bins (1.1 cubic meter capacity), 13 excavators, 13 semi-trailer trucks with flatbed trailers, and 13 mobile service vehicles; and (ii) constructing 13 provincial vehicle maintenance service centers for sustainable O&M of vehicle and equipment.

### C. Value Added by ADB

16. The following features provide ADB value addition:
- (i) **Applying a holistic approach.** This project builds on the existing support under the ADB SWM project (footnote 15) by providing phased assistance to strengthen the regulatory framework, make service delivery institutions operational, substantially improve SWM collection service coverage, and enhance environmental compliance. Through the project, ADB continues to contribute to policy reforms that protect the environment, boost economic growth, and reduce poverty.
  - (ii) **Adopting advance technology and innovation design.** The project introduces innovative design features such as (a) expanding global positioning system (GPS)

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<sup>18</sup> Including (i) surface water, groundwater and leachate; (ii) soils and geologic materials; (iii) air quality; and (iv) odor.

tracking features for all SWM vehicles, (b) utilizing solar power technologies in service centers, (c) using alternative fuels for vehicles and equipment, and (d) utilizing modern electronic equipment and training techniques in the association's capacity development facility.

- (iii) **Strengthening institutional capacity.** The project strengthens *toza hudud* operations through implementation of a business restructure plan, and institutes performance-based management initiatives.
- (iv) **Encouraging private sector participation.** The project builds on government's recent private sector initiatives in providing strategic directions to (a) transition towards a structure that separates SCEEP's regulatory role from the *toza hududs'* service provision role, (b) establish a SWM project pipeline based on a business case of economic and financial viability for private investment, and (c) develop a plan to position the *toza hududs* for increased asset management and performance-based service delivery.
- (v) **Promoting climate mitigation.** Through the utilization of solar power and fuel efficient vehicles and equipment, the project will reduce energy consumption and in turn, contribute to climate mitigation and the reduction of coping costs.

#### D. Summary Cost Estimates and Financing Plan

17. The project is estimated to cost \$112.0 million (Table 1). Detailed cost estimates by expenditure category and by financier are included in the project administration manual (PAM).<sup>19</sup>

**Table 1: Summary Cost Estimates**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. SWM subsector regulatory framework enhanced <sup>c</sup>	0.9
2. Association and <i>toza hudud</i> capacity strengthened	1.5
3. Environmental monitoring capabilities of SCEEP improved	10.5
4. SWM collection and interim disposal services in small urban centers and peri-urban and rural areas improved nationwide	85.7
<b>Subtotal (A)</b>	<b>98.6</b>
<b>B. Contingencies<sup>c</sup></b>	<b>9.7</b>
<b>C. Financial Charges During Implementation<sup>d</sup></b>	<b>3.7</b>
<b>Total (A+B+C)</b>	<b>112.0</b>

SCEEP = State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection, SWM = solid-waste management, *toza hudud* = state unitary enterprise.

<sup>a</sup> Includes taxes and duties of \$44.04 million to be financed by the government, out of which \$44.01 million is an exemption from taxes and duties. SCEEP will finance the balance of \$0.03 million, comprising a single social tax for the project management unit.

<sup>b</sup> In September 2019 prices; currency used is United States dollar.

<sup>c</sup> Physical contingencies are computed at an average of 5.0% for civil works and equipment. Price contingencies are computed at 1.5%–1.6% on foreign exchange costs and an average of 10.5% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Includes interest rate—London interbank offered rate-based 5-year United States dollar fixed swap rate for ordinary capital resources loans as of 23 August 2019—plus contractual spread of 0.50%, maturity premium of 0.10%, and commitment charges of 0.15% on the undisbursed loan amount.

Source: Asian Development Bank estimates.

18. The government has requested a regular loan of \$60 million from ADB's ordinary capital resources to help finance the project. The loan will have a 25-year term, including a grace period of 5 years; an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year (the interest and

<sup>19</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

other charges during construction to be capitalized in the loan); and such other terms and conditions set forth in the draft loan agreement. Based on the straight-line method, the average maturity is 15.25 years, and the maturity premium payable to ADB is 0.10% per year.

19. The summary financing plan is in Table 2. ADB will finance expenditures in relation to civil works, goods, project implementation support, training, capacity building, and interest during implementation. The government will finance expenditures in relation to duties, taxes, and physical and price contingencies. It will also finance costs of the project management unit (PMU) in the executing agency, design and supervision, and vehicle GPS upgrades.

**Table 2: Summary Financing Plan**

<b>Source</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank		
Ordinary capital resources (regular loan)	60.0	53.6
Government <sup>a</sup>	52.0	46.4
<b>Total</b>	<b>112.0</b>	<b>100.0</b>

<sup>a</sup> Government contributions include taxes and duties, part of contingencies, as well as costs of solid-waste management vehicle global positioning system tracking system upgrades, and design supervision. Out of these, a single social tax for the project management unit, contingencies in part of the government, as well as costs of solid-waste management vehicle global positioning system tracking system upgrades and design supervision are to be financed by the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection. Government contributions are subject to clarification after the approval of the national feasibility study.

Source: Asian Development Bank estimates.

20. Climate mitigation is estimated to cost \$2.22 million, to be 100% financed by ADB.<sup>20</sup>

## **E. Implementation Arrangements**

21. SCEEP is the executing agency for the project. A PMU under SCEEP will handle procurement, contract management, financial management, project administration, safeguards compliance, and reporting.<sup>21</sup> The Republican Association of Specialized Enterprises for Sanitary Cleaning is the implementing agency for the project, responsible for coordinating, monitoring, verifying, and reporting project implementation progress. SCEEP requested advance action and retroactive financing for the procurement of goods and consulting services. The project is procurement ready, with the first contract packages for waste collection trucks, bins, and equipment are expected to be awarded in the second quarter of 2020.

22. The implementation arrangements are summarized in Table 3 and described in detail in the PAM (footnote 19).

**Table 3: Implementation Arrangements**

<b>Aspects</b>	<b>Arrangements</b>
Implementation period	June 2020–December 2024
Estimated completion date	December 2024
Estimated loan closing date	30 June 2025
<b>Management</b>	
(i) Oversight body <sup>a</sup>	Ministry of Finance Ministry of Investment and Foreign Trade

<sup>20</sup> Climate mitigation includes the installation of alternative solar power systems in each provincial service center, and the provision of fuel-efficient and emission-compliant vehicles and equipment.

<sup>21</sup> The project implementation unit of the ongoing ADB Solid Waste Management Improvement Project has been transitioned to the SCEEP with strengthened capacity and is designated as the PMU for the project in order to leverage its capacity and experience.

Aspects	Arrangements		
(ii) Executing agency	SCEEP		
(iii) Implementing agency	Republican Association of Specialized Enterprises for Sanitary Cleaning		
(iv) Implementation unit	Project management unit under SCEEP		
Procurement	Open competitive bidding (internationally advertised)	6 contracts	\$46.00 million
Consulting services	QCBS (90:10): Project management	International: 19 person-months National: 106 person-months	\$0.92 million
	QCBS (90:10): SWM subsector regulatory framework enhancement	International: 1 contract	\$0.80 million
	QCBS (90:10): Association and <i>toza hudud</i> capacity strengthening	International: 1 contract	\$1.05 million
	CQS: Financial audit	National: 1 contract	\$0.12 million
Retroactive financing and advance contracting	Advance contracting for the project management consultant and the procurement of collection trucks, collection bins, and operational equipment. Retroactive financing will be up to 20% of the loan proceeds to finance expenditures incurred prior to loan effectiveness but not earlier than 12 months from the effective date of the legal agreement.		
Disbursement	The loan proceeds will be disbursed following ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, CQS= consultants' qualifications selection, QCBS = quality- and cost-based selection, SCEEP = State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection, SWM = solid-waste management, *toza hudud* = state unitary enterprise.

<sup>a</sup> The functions of oversight bodies are stipulated in the Decree of the President of the Republic of Uzbekistan PP-3857 "On measures for improvement of the procedure for performing due diligence on pre-project, project, tender documentation and contracts," dated 20 February 2018.

Source: ADB.

### III. DUE DILIGENCE

#### A. Technical

23. The project supports priorities identified in the SWM strategy and addresses critical deficiencies in SWM service provision by expanding MSW collection services to about 6 million unserved or underserved inhabitants nationwide. Feasibility assessment has considered a range of SWM vehicle and equipment alternatives and the selection of a preferred alternative that maximizes efficiency while ensuring equitable vehicle and equipment distribution throughout the nation's 13 provinces. The service centers will strengthen long-term system sustainability, and in turn build managerial and operational capacity. The project investments have also been designed to seamlessly integrate with future SWM system upgrades, notably the establishment of regional MSW collection, transfer, treatment, and disposal systems. The system design prioritizes the introduction of new technologies, including enhanced GPS tracking features for SWM vehicles, vehicles and equipment that meet international emission standards, and the use of alternative fuels such as compressed natural gas in vehicles.

#### B. Economic and Financial Viability

24. **Economic analysis.** The project is economically viable with an economic internal rate of return of 17.3%, which is above ADB's minimum prescribed discount rate of 9.0%. The project remains economically robust under various scenarios including a 10% increase in investment cost, a 10% increase in O&M costs, and a 10% decline in project benefits. The quantified

economic benefits of the project include (i) incremental consumption benefits from the improved SWM for residents, and (ii) the incremental (value added) tourism benefits accruing to the economy as a result of a cleaner and consequently more attractive environment. The project team calculated the incremental consumption benefits of the project based on an estimated willingness to pay of SUM2,319 per person per month using a contingent valuation methodology. The project team estimated the tourism benefits based on about 170,000 international visitors visiting the project towns and cities, as well as their length of stay and average daily spending.<sup>22</sup>

25. **Financial analysis.** The financial analysis assesses the 13 *toza hududs* and their ability to generate sufficient revenues to cover their operating expenses. Although the *toza hududs* were established in late 2017, the analysis of their 2018 audited financial statements reveal that 12 out of the 13 *toza hududs* generated sufficient revenues to cover their operating expenses. Only one did not meet its operating expenses in 2018, however it mitigated this shortfall with a 17% tariff increase in January 2019 and covered its operating expenses in 2019. The projections of the *toza hududs* over the next 10 years, with a 5% profit margin and 20% debt repayment for each required by SCEEP, indicate that all will meet their operating expenses with an average annual tariff compound growth of 8.6% over a 5-year period (2019–2024) when they start to pay their debts in 2024, and from then annual tariff increases of about 7.7% (same as the inflation rate). The impact of tariff increases is about 0.4% of monthly household income, within 1.0% of monthly household income which is considered reasonable and affordable.<sup>23</sup>

### C. Sustainability

26. The project's outcome will be sustained over the long term through a combination of project interventions. Through the project, (i) the subsector's regulatory framework will be enhanced to improve sector operations; (ii) the capacity of the Republican Association of Specialized Enterprises for Sanitary Cleaning and *toza hududs* will be strengthened; (iii) a public education and awareness program will promote SWM consumer awareness and improved community SWM nationwide; and (iv) the project's vehicle and equipment fleets maximize efficiency and distribution equity, being sustained through the service centers. The project is financially and economically viable and has built-in climate mitigation measures. It will improve the environment, reduce public health risks, support tourism and economic development, and improve the quality of life of 6 million people, many of whom live in peri-urban and rural areas.

### D. Governance

27. The financial management assessment concluded that the capacity of SCEEP and its PMU is adequate to implement this project.<sup>24</sup> The overall risk is considered *substantial*, because the public financial management risk at the country level is substantial due to weak internal audit functions and international standards not being followed. The project-level risk is, however, *moderate*, as both SCEEP and the PMU have experience with ADB-financed projects and are familiar with ADB's financial management requirements and disbursement procedures. Certain financial management areas will be further strengthened under the project, as detailed in the PAM (footnote 19).

<sup>22</sup> Based on travel statistics published by the State Committee of the Republic of Uzbekistan for Tourism Development.

<sup>23</sup> Water Sanitation Program. 2011. *Cost Recovery in Urban Water Services: Select Experiences in Indian Cities*. Washington, DC. World Health Organization benchmark of expenditure at 5% of monthly household income.

<sup>24</sup> The financial management assessment was conducted in September 2019 in accordance with (ADB. 2005. [Financial Management and Analysis of Projects](#). Manila.; and ADB. 2009. [Financial Due Diligence: A Methodology Note](#). Manila.)

28. A project procurement risk assessment was conducted as part of the strategic procurement planning process. The overall risk is considered *moderate*. Risks identified in the country sector procurement risk assessment impacting at the project level are *moderate*. The capacity of SCEEP and its PMU is considered satisfactory. Risks for each of the different project phases (i.e. design, tender, contract implementation) were identified, with twelve out of total forty-eight are considered as high. Details of risks and mitigation measures are described in the project procurement risk assessment and PAM (footnote 19). To achieve the principle of value for money, fit-for-purpose procurement arrangements will be considered during the implementation in accordance with the procurement strategy prepared in the strategic procurement planning. The project team conducted integrity due diligence. No significant integrity risks were identified.

29. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and SCEEP. The specific policy requirements and supplementary measures are described in the PAM (footnote 19).

### **E. Poverty, Social, and Gender**

30. Overall, the national poverty rate is estimated at 11.4%.<sup>25</sup> However, using 1.5 times the minimal wage as a poverty threshold, the poverty and social assessment concluded that 23.3% of the project area's households are poor. The project will improve SWM for underserved rural areas and improve the level of customer satisfaction from 63% to 80%. Social infrastructure facilities also suffer from a lack of SWM services. In the project areas, more than 40,000 institutions and organizations located in rural areas are functioning with irregular solid-waste collection. The overall project social impacts are expected to be positive, with improvements to the quality of life for people in peri-urban and rural areas. The project will improve solid-waste collection, recovery, and disposal services for the full range of social strata, including the rural poor and other vulnerable groups in each *toza hudud's* areas. The majority (92.7%) of the surveyed households are willing to pay for the improved SWM services.

31. Women are less represented in the subsector (12%), with limited employment opportunities. The project will create new managerial and technical jobs and provide professional skills improvement for female staff in *toza hududs*. Women are disproportionately engaged in the handling of household waste and are affected when scavenging in uncontrolled environments. The project will have a positive impact on rural livelihoods and women's burden. The poverty reduction and social strategy includes measures to address social impacts and enhance distribution of benefits from the project. Proposed tariffs have been assessed as affordable for low-income groups. Women and children (especially girls) will benefit from the project because of secure and better waste collection and disposal services. The project will be classified as *effective gender mainstreaming*. The gender benefits of the project include (i) gender equity provisions in the regulatory framework, (ii) gender-responsive measures in the institutional strengthening program, (iii) gender-sensitive customer relations and complaints systems, and (iv) female staff's professional advancement and equal employment opportunities.

### **F. Safeguards**

32. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.<sup>26</sup>

<sup>25</sup> ADB. 2019. [Basic 2019 Statistics](#). Manila.

<sup>26</sup> ADB. [Safeguard Categories](#).

33. **Environment (category B).** An initial environmental examination (IEE) was undertaken, and it includes 13 sites (one in each province of the nation) selected for the construction of service centers. Environmental impacts from the project are expected to be site specific and include dust, waste generation, asbestos, and the transportation of construction materials. These impacts can be mitigated by proper implementation of mitigation measures developed in the environmental management plan (EMP). The IEE includes mitigation measures for the construction and operational phases, as presented in the EMP. For two sites, additional waste management and dust control measures are included in the EMP for the construction period because of their locations in the vicinity of settlements. PMU will prepare an asbestos management and disposal plan as part of the EMP for the sites where asbestos is present. All sites are in compliance with relevant sanitary protection zone requirements. Because of the limited and specific types of maintenance works which will be provided by the service centers, environmental impacts during the operational phase will be limited. The project team conducted public consultation meetings with stakeholders in each project site.

34. The PMU under SCEEP will be responsible for EMP implementation and compliance with ADB's safeguards requirements and national regulations. One environment specialist will oversee EMP implementation. A grievance redress mechanism to mitigate environmental and social safeguard issues has been confirmed with the executing agency, implementing agency, and stakeholders during public consultations. The grievance redress mechanism will be established after project effectiveness. PMU will prepare the environmental monitoring reports (EMRs) and submit to ADB and relevant government agencies. This includes semiannual EMRs and a final EMR that will incorporate post-construction environmental audits. The EMRs will also be disclosed to the public on the SCEEP and *toza hudud* websites (in Uzbek or Russian) and the ADB website (in English). ADB disclosed the draft IEE on its website on 8 October 2019.

35. **Involuntary resettlement (category C).** Due diligence confirmed that the construction of the 13 service centers will not entail involuntary resettlement impacts. Land plots for nine new service centers have been allocated from government reserve lands, and the remaining four service centers will not require additional land provision. The project team prepared a safeguards due diligence report to (i) screen all the project activities and potential involuntary resettlement impacts and risks associated with the project, (ii) confirm there are no outstanding legacy issues in the project sites, and (iii) confirm that measures to avoid the adverse impacts are integrated into the project design. The executing agency has sufficient understanding of ADB's safeguards policy, principles, and requirements, and has committed to mitigation measures as appropriate. The supervision consultant will conduct periodic monitoring to verify that there are no adverse impacts during implementation and that public consultation, information disclosure, and grievance redress are carried out during the project period.

36. **Indigenous peoples (category C).** There are no indigenous peoples or communities present at or around the project sites.

## **G. Summary of Risk Assessment and Risk Management Plan**

37. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>27</sup>

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<sup>27</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigation Measures</b>
<i>Toza hududs</i> unable to financially support operating costs and debt repayments	Analysis indicates that all <i>toza hududs</i> will meet O&M expenses and loan debt servicing obligations from their revenues. The government has committed if necessary to provide subsidies for debt servicing, including foreign exchange risks and the O&M of the project.
Government approval procedures take longer than anticipated	Close coordination will be maintained with SCEEP (executing agency), the Republican Association of Specialized Enterprises for Sanitary Cleaning (implementing agency), and other government agencies.
Elevated financial management risks because lack of internal audit unit within SCEEP	MOF confirmed to include the project in the government internal audit program by loan effectiveness.
Limited capacity of Republican Association of Specialized Enterprises for Sanitary Cleaning and <i>toza hududs</i> slow down implementation	Institutional capacity will be strengthened through (i) training programs conducted in a new Republican Association of Specialized Enterprises for Sanitary Cleaning capacity building facility, (ii) a twinning arrangement with an international SWM training and certification facility, and (iii) international training and professional accreditation of key <i>toza hudud</i> personnel.

MOF = Ministry of Finance, O&M = operation and maintenance, SCEEP = State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection, SWM = solid-waste management, *toza hudud* = state unitary enterprise.

#### **IV. ASSURANCES AND CONDITIONS**

38. The government and SCEEP have assured ADB that implementation of the project shall conform to all applicable ADB requirements, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, financial management, and disbursement as described in detail in the PAM and loan documents.

39. The government and SCEEP have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement.

#### **V. RECOMMENDATION**

40. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of \$60,000,000 to the Republic of Uzbekistan for the Sustainable Solid-Waste Management Project, from ADB's ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement presented to the Board.

Masatsugu Asakawa  
President

26 March 2020

## DESIGN AND MONITORING FRAMEWORK

Impact the project is aligned with: Environment, health, and living conditions improved (National Strategy of Solid-Waste Management in the Republic of Uzbekistan for 2019–2028) <sup>a</sup>			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<b>Outcome</b> Reliable and sustainable SWM services improved and expanded in small urban centers, and peri-urban and rural areas nationwide	By Q2 2024: a. At least 6 million unserved or underserved consumers, including at least 50% women, in small urban centers and peri-urban and rural areas nationwide receive regular SWM collection, transfer, and disposal services (2019 Baseline: 0) RFI-A  b. <i>Toza hudud</i> service delivery capacity, including the collection of municipal solid waste in 13 regions, increased to 7,500 tons per day (2019 Baseline: 5,000 tons per day)  c. Sex-disaggregated consumer satisfaction with the quality of SWM services increased to 80% (2019 Baseline: 63%)	a–c. Executing agency project completion report and survey report	<i>Toza hududs</i> are unable to financially support operating costs and debt repayments.
<b>Outputs</b> 1. SWM subsector regulatory framework enhanced	<b>Indicative Policy Actions</b> By Q2 2024 1a. New gender-responsive regulations to enhance SWM operations adopted (2019 Baseline: 0)  1b. Regulations to improve public accountability and transparent tariff setting methodologies, incorporating gender elements, adopted (2019 Baseline: 0)  1c. Law on waste adopted (2019 Baseline: 0)  1d. At least 50 public consultations with at least 50% female participation conducted (2019 Baseline: 0)	1a–1d. Quarterly project progress reports, executing agency project completion report	Government approval procedures take longer than anticipated.
2. Republican Association of Specialized Enterprises for Sanitary Cleaning and <i>toza hudud</i> capacity strengthened	2a. <i>Toza hudud</i> institutional diagnostic assessment completed by Q1 2021 (2019 Baseline: 0)  2b. <i>Toza hudud</i> business restructure plan and road map implemented by Q1 2022 (2019 Baseline: 0)  2c. Performance management framework including KPIs and benchmarking system operational by Q1 2022 (2019 Baseline: 0)  2d. All 13 <i>toza hududs</i> improve their KPIs, as verified by the Republican Association of Specialized Enterprises for Sanitary Cleaning by Q1 2023 (2019 Baseline: 0)  2e. One <i>toza hudud</i> is reorganized to include an asset management division and a performance-based operations division on a pilot basis by Q1	2a–2f, 2h–2i. Quarterly project progress reports, executing agency project completion report, and annual audit reports	Limited association and <i>toza hudud</i> capacity slow implementation  Elevated financial management risks because of weak internal audit function within SCEEP

	<p>2023 (2019 Baseline: 0)</p> <p>2f. International center for certification and training with at least 30% women personnel operational by Q1 2022 (2019 Baseline: 0)</p> <p>2g. At least four officers (of which at least two are women) from each <i>toza hudud</i> trained and accredited by the Republican Association of Specialized Enterprises for Sanitary Cleaning in basic SWM utility management, financial management, gender-responsive human resources policy, and SWM system O&amp;M by Q3 2022 (2019 Baseline: 0)</p> <p>2h. Gender-responsive grievance redress mechanism made operational and sex-disaggregated MIS for customer relations and public reporting established by Q1 2022 (2019 Baseline: 0)</p> <p>2i. Gender-responsive customer relations system, with at least 50% of female staff in each <i>toza hudud</i>, established by Q1 2022 (2019 Baseline: 0)</p> <p>2j. Twinning arrangement with an international SWM training and certification facility established by Q3 2022 (2019 Baseline: 0)</p>	<p>2g. Association's training curriculum</p> <p>2j. Signed twinning agreement</p>	
3. Environmental monitoring capabilities of SCEEP improved	<p>3a. Environmental testing capabilities of SCEEP's environmental laboratories upgraded to international standard by Q3 2022 (2019 Baseline: 0)</p> <p>3b. At least 20 staff (of which at least eight are women) from SCEEP's laboratories trained by an accredited international training center in laboratory testing techniques by Q3 2022 (2019 Baseline: 0)</p>	3a–3b. Quarterly project progress reports, executing agency project completion report, and SCEEP report	
4. SWM collection and interim disposal services in small urban centers and peri-urban and rural areas improved nationwide	<p>4a. 300 SWM collection vehicles (12.0 m<sup>3</sup> capacity), 6,000 waste disposal bins (1.1 m<sup>3</sup> capacity), 13 excavators, 13 flatbed trucks, and 13 mobile service vehicles commissioned by Q4 2020 (2019 Baseline: 0)</p> <p>4b. Vehicle maintenance service centers with at least 10% female staff established and operational in each of the 13 provinces by Q1 2022 (2019 Baseline: 0)</p> <p>4c. At least 26 "clean city" education campaigns covering all 13 provinces and with 50% female participation conducted by Q1 2022 (2019 Baseline: 0)</p> <p>4d. Gender-sensitive information toolkit "zero waste" for schools developed in the local language and distributed to schools in all 13 provinces by Q1 2022 (Baseline 2019: 0)</p> <p>4e. Special youth-targeted mass media</p>	4a–4e. Quarterly project progress reports, executing agency project completion report, and personnel list of <i>toza hududs</i>	

	campaign conducted with four gender-responsive knowledge products by Q1 2022 (2019 Baseline:0)		
<p><b>Key Activities with Milestones</b></p> <p><b>1. SWM subsector regulatory framework enhanced</b></p> <p>1.1. Mobilize consultants by Q3 2020</p> <p>1.2. New regulations to enhance gender-responsive SWM operations by Q2 2024</p> <p>1.3. Adopt regulations to improve public accountability and transparent tariff-setting methodologies, incorporating gender elements, by Q2 2024</p> <p>1.4. Adopt international best practices in gender-inclusive PPP in SWM by Q2 2024</p> <p>1.5. Adopt a law on waste by Q2 2024</p> <p>1.6. Conduct public hearings with at least 50% female participation by Q2 2024</p> <p><b>2. Republican Association of Specialized Enterprises for Sanitary Cleaning and <i>toza hudud</i> capacity strengthened</b></p> <p>2.1. Mobilize consultants by Q3 2020</p> <p>2.2. Complete <i>toza hudud</i> institutional diagnostic assessment by Q1 2021</p> <p>2.3. Make performance management framework operational by Q1 2022</p> <p>2.4. Verify that all 13 <i>toza hududs</i> improve their KPIs by Q1 2023</p> <p>2.5. Reorganize one <i>toza hudud</i> to include an asset management division and a performance-based operations division on a pilot basis by Q1 2023</p> <p>2.6. Make international center for certification and training operational with at least 30% women by Q1 2022</p> <p>2.7. Make a gender-sensitive grievance redress mechanism operational and establish a sex-disaggregated MIS for customer relations and public reporting by Q1 2022</p> <p>2.8. Establish a gender-responsive customer relations system, with at least 50% female staff, in each <i>toza hudud</i> by Q1 2022</p> <p>2.9. Make at least four training modules in SWM operations operational, including one on gender sensitivity by Q3 2022</p> <p>2.10. Establish a twinning arrangement with an international SWM training and certification facility by Q3 2022</p> <p><b>3. Environmental monitoring capabilities of SCEEP improved</b></p> <p>3.1. Mobilize consultants by Q3 2020</p> <p>3.2. Equip and make operational the environmental laboratories by Q3 2022</p> <p>3.3. Complete the training and certification programs for laboratory staff by Q3 2022</p> <p><b>4. SWM collection and interim disposal services in small urban centers and peri-urban and rural areas improved nationwide</b></p> <p>4.1. Commence procurement of waste collection trucks and equipment by Q1 2020</p> <p>4.2. Award the waste collection trucks and equipment contracts by Q2 2020</p> <p>4.3. Award the project management consultant contract by Q3 2020</p> <p>4.4. Complete commissioning of all waste collection trucks and equipment by Q4 2020 and truck maintenance service center contracts by Q3 2020</p> <p>4.5. Make truck maintenance service centers operational by Q1 2022</p> <p>4.6. Conduct awareness-raising campaigns on sustainable waste management by Q1 2022</p> <p>4.7. Design and disseminate information tool kit for schools by Q2 2022</p> <p>4.8. Produce four gender-responsive knowledge products focused on youth by Q2 2022</p> <p><b>Project Management Activities</b></p> <p>Prepare and submit project progress reports.</p>			
<p><b>Inputs</b></p> <p>ADB: \$60.0 million</p> <p>Government: \$52.0 million</p>			
<p><b>Assumptions for Partner Financing</b></p> <p>Not applicable</p>			

ADB = Asian Development Bank, KPI = key performance indicator, m<sup>3</sup> = cubic meter, MIS = management information system, MSW = municipal solid waste, O&M = operation and maintenance, PPP = public-private partnership, Q = quarter, RFI-A = 6 million unserved or underserved consumers in small urban centers and peri-urban and rural areas receive regular SWM collection, transfer, and disposal services throughout the nation's 13 provinces, SCEEP = State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection, SWM = solid-waste management, *toza hudud* = state unitary enterprise.

<sup>a</sup> Government of Uzbekistan. 2017. Resolution No. PP-4291 *About approval of Strategy according to the treatment of municipal solid waste in the Republic of Uzbekistan for 2019-2028* (April 2019). Tashkent.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=51034-002-3>

1. Loan Agreement
2. Sector Assessment (Summary): Water and Other Urban Infrastructure and Services
3. Project Administration Manual
4. Financial Analysis
5. Economic Analysis
6. Summary Poverty Reduction and Social Strategy
7. Risk Assessment and Risk Management Plan
8. Gender Action Plan
9. Initial Environmental Examination

**Supplementary Documents**

10. Project Technical Analysis
11. Detailed Financial Analysis
12. Detailed Economic Analysis
13. Financial Management Assessment
14. Project Procurement Risk Assessment Report