

Project Administration Manual

Project Number: 42184-027
Loan Number: 3388-MON
September 2018

Mongolia: Additional Financing for Southeast Gobi
Urban and Border Town Development Project

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
DMF	–	design and monitoring framework
EIA	–	environmental impact assessment
EMP	–	environmental management plan
IEE	–	initial environmental examination
MCUD	–	Ministry of Construction and Urban Development
MOF	–	Ministry of Finance
NCB	–	national competitive bidding
PAM	–	project administration manual
PMU	–	project management unit
PPMS	–	project performance management system
PUSO	–	public utility service organization
QCBS	–	quality- and cost-based selection
RRP	–	report and recommendation of the President
SGAP	–	social and gender action plan
SOE	–	statement of expenditure
TOR	–	terms of reference
TSA	–	Treasury single account
WSRC	–	Water Services Regulatory Commission
WWTP	–	wastewater treatment plant

CONTENTS

	Page
I. PROJECT DESCRIPTION	1
A. Rationale	1
B. Impact and Outcome	4
C. Outputs	5
II. IMPLEMENTATION PLANS	6
A. Project Readiness Activities	6
B. Overall Project Implementation Plan	6
III. PROJECT MANAGEMENT ARRANGEMENTS	7
A. Project Implementation Organizations: Roles and Responsibilities	8
B. Key Persons Involved in Implementation	10
C. Project Organization Structure	11
IV. COSTS AND FINANCING	12
A. Cost Estimates	12
B. Key Assumptions	12
C. Revised Project and Financing Plan	13
D. Detailed Cost Estimates by Expenditure Category	15
E. Allocation and Withdrawal of Loan Proceeds	16
F. Detailed Cost Estimates by Financier (\$ million)	17
G. Detailed Cost Estimates by Output (\$ million)	18
H. Detailed Cost Estimates by Year (\$ million)	19
I. Contract and Disbursement S-Curve	20
J. Fund Flow Diagram	21
V. FINANCIAL MANAGEMENT	21
A. Financial Management Assessment	21
B. Disbursement	22
C. Accounting	23
D. Auditing and Public Disclosure	24
VI. PROCUREMENT AND CONSULTING SERVICES	25
A. Procurement of Goods, Works, and Consulting Services	25
B. Procurement Plan	26
C. Consultant's Terms of Reference	33
VII. SAFEGUARDS	52
A. Environment Safeguards	52
B. Involuntary Resettlement	55
C. Indigenous Peoples	56
VIII. GENDER AND SOCIAL DIMENSIONS	56
A. Social and Poverty Benefits	56
B. Gender	57
C. Other Social Aspects	57
IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION	58
A. Project Design and Monitoring Framework	58

B.	Monitoring	63
C.	Review and Evaluation	65
D.	Reporting	65
E.	Stakeholder Communication Strategy	66
X.	ANTICORRUPTION POLICY	67
XI.	ACCOUNTABILITY MECHANISM	67
XII.	RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL	68

Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ministry of Construction and Urban Development (MCUD) and the *aimag* (province) governments of Baruun-Urt (Sukhbaatar), Bulgan City (Bulgan), Chinggis City (Khentii), Mandalgovi (Dundgovi), and Murun (Khuvsgul) are wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by MCUD and the *aimag* (province) governments of Baruun-Urt (Sukhbaatar), Bulgan City (Bulgan), Chinggis City (Khentii), Mandalgovi (Dundgovi), and Murun (Khuvsgul) of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

A. Rationale

1. **Current project.** On 19 April 2010, the Asian Development Bank (ADB) approved a grant of \$15.0 million from its Special Funds resources for the Southeast Gobi Urban and Border Town Development Project to support the provision of urban infrastructure and service improvements in the fast-growing urban areas of the Southeast Gobi.¹ The grant has been extended and its closing date is 31 May 2019.² To complement the outputs of the grant, ADB approved a loan of \$19.43 million on 22 April 2016 as additional financing for the construction and operation of wastewater treatment plants (WWTPs) in four *aimag* centers.³ The loan was approved with attached technical assistance (TA) of \$1.0 million provided by the Sanitation Financing Partnership Trust Fund under the Water Financing Partnership Facility.⁴ The TA was to support the Government of Mongolia in addressing sludge reuse, including implementing a pilot program in one of the four *aimag* centers. The loan closing date is 30 June 2020, while the TA closing date is 31 October 2019. Project implementation progress is *satisfactory*. The grant was implemented on time and completed by July 2018 with both physical progress and disbursement at 98%. The first additional financing is *on track* with disbursement at 19.7% and contract awards at 58.3% by July 2018.

2. **Additional financing.** The Government of Mongolia prioritized the request for a second additional financing loan to replicate some of the outputs of the current project⁵ in other *aimag* centers with comparable geographic and economic characteristics and similar wastewater treatment needs. The proposed loan will finance the construction and operation of WWTPs in five *aimag* centers: Baruun-Urt (Sukhbaatar province), Bulgan City (Bulgan province), Chinggis City (Khentii province), Mandalgovi (Dundgovi province), and Murun (Khuvsgul province).

3. The project *aimags* are examples of rapidly growing second-tier cities. With an aggregate urban population of about 115,000, the project *aimags* made up about 5.4% of Mongolia's urban population in 2017.⁶ Two of the project *aimags* centers (Chinggis City and Baruun-Urt) have shown above-average increases in population and share of the gross domestic product, while the population and gross domestic product in the remaining three (Bulgan City, Mandalgovi, and Murun) have grown at or slightly below the national average outside the capital, Ulaanbaatar.⁷ All project cities have a sewerage network that serves the core urban area. The public utility service organizations (PUSOs) have found that the relatively young sewerage systems are in generally good condition and not in need of replacement or

¹ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Grant to Mongolia for the Southeast Gobi Urban and Border Town Development Project*. Manila.

² The implementation of the grant is complete, with only a small disbursement remaining. The grant was extended to meet the eligibility criteria, allowing the processing of the proposed additional financing.

³ ADB 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for Additional Financing and Administration of Technical Assistance Grant to Mongolia for the Southeast Gobi Urban and Border Town Development Project*. Manila. The *aimag* centers are Arvaikheer (Uvurkhangai), Dalanzadgad (Umnugovi), Sainshand (Dornogovi), and Tsetserleg (Arkhangai).

⁴ Financing partner: Bill & Melinda Gates Foundation. Administered by ADB.

⁵ For clarity, the original grant and the first additional financing loan are referred to as "the current project" and the proposed second additional financing as "the proposed project."

⁶ The total number of direct beneficiaries is estimated at 30,273 households in the apartment and *ger* areas once plants are operating at full capacity and includes businesses and institutions within *aimag* centers.

⁷ Based on ADB. 2015. *Mongolia National Urban Assessment*. Ulaanbaatar; and *aimag* population records. Average population growth rates from 2008 to 2017 were as follows: national 1.4%, Bulgan City 0.7%, Baruun-Urt 3.5%, Chinggis City 3.4%, Mandalgovi 1.2%, and Murun 1.0%.

expansion.⁸ All project cities have WWTPs, which employ waste stabilization (oxidation) ponds as the main biological treatment process. The pond systems are preceded in some cases (Chinggis City and Mandalgovi) by preliminary (screening and grit removal) and primary (sedimentation) treatment processes. However, these preliminary treatment units are no longer fully operational.⁹ All the treatment systems (i) are generally in a poor state of repair, (ii) represent a technology that is not suitable for Mongolian climatic conditions, and (iii) are not providing a consistent level of treatment that complies with Mongolian wastewater discharge standards. In addition, these *aimag* centers are growing rapidly, driven by the government's support for a large apartment construction program.¹⁰ This will lead to significant increases in wastewater flows over the next decade as new apartment blocks are occupied, exceeding the capacity of most of the existing WWTPs.

4. **Performance of the current project.** The current project has performed well¹¹ and is rated on track.

- (i) **Output delivery.** The current project has made significant progress toward achieving its outcomes. It has (a) improved access to water supply, sewerage, solid waste management, and heating coverage in planned (*non-ger*) areas in the project *soums*; (b) ensured that almost 95% of *ger* area dwellers in the project *soums* have access to potable water within 300 meters of their dwellings; (c) reduced the time women and children take to collect water; and (d) established and made operational new water supply, sewerage, and heating networks. The current project is also on track to accomplish all of its outputs. Under part A,¹² standard lease agreements now form the basis of the service agreements between the local governments and PUSOs. Urban development plans (general plans) for Khanbogd, Gurvantes, and Tsogttsetsii *soums* of Umnugovi *aimag* and Sainshand *soum* of Dornogovi *aimag* were prepared and approved by *aimag khurals* and the relevant state expertise agency.¹³ Capacity building seminars and training on institutional and human resource development, urban planning and implementation of the general plans, and land acquisition and resettlement were held for more than 250 *aimag* officials, of whom 35% were women. Under part B, new water supply, wastewater collection, solid waste management, and heating system improvements have been financed in Dalanzadgad, Gurvantes, Khanbogd, Sainshand, Tsogttsetsii, and Zamyn-Uud. While most assets delivered under part A of the current project are completed and operational, others are *on track*, according to the current implementation plan (footnotes 1 and 3).

⁸ PUSOs are agencies responsible for managing and operating water and wastewater services on behalf of the *aimag* governments.

⁹ Existing pond systems will be decommissioned, except in Bulgan City, Chinggis City, and Murun, where they will be reused as polishing ponds. The capacities of existing plants are as follows: Baruun-Urt 720 cubic meters per day (m³/day); Bulgan City 800 m³/day; Chinggis City 1,100 m³/day; Mandalgovi 1,400 m³/day; and Murun 1,000 m³/day.

¹⁰ In 2015, the national government launched the "100,000 houses" program. It aims to build 25,000 homes in *aimags* and *soums*, and the remaining 75,000 in Ulaanbaatar. The program does not target a specific group, which means it is open to all people who want to own apartments and who can meet the requirements. The program has been funded through bonds that were issued by the Development Bank of Mongolia.

¹¹ Summary of Project Performance (accessible from the list of linked documents in Appendix 2).

¹² The current project included a total of 10 outputs presented under two parts, Part A and B.

¹³ General plans for Khanbogd, Gurvantes, and Tsogttsetsii *soums* of Umnugovi *aimag* were approved by *aimag khural* on 27 March 2014 and by the State Great Khural on 6 August 2015. The general plan of Sainshand *soum* of Dornogovi *aimag* and New Sainshand residential district partial general plan were approved by *aimag khural* on 4 December 2013 and by the State Great Khural on 24 June 2015.

- (ii) **Implementation progress.** The current project's implementation progress is *satisfactory*, and both disbursement and contracts awards are *on track*. For the first additional financing, the following contracts were awarded: (a) consulting package for project management, procurement, and supervision support in June 2017; (b) capacity support for the project management unit (PMU) and PUSOs in September 2017; (c) Umnugovi WWTP in December 2017; and (d) Uvurkhangai WWTP in February 2018. The tender for the Arkhangai WWTP was issued in February 2018. The modification of detailed designs for the Dornogovi WWTP and its 4.4-kilometer sewerage pipeline connection were approved in November 2017.
- (iii) **Safeguard compliance.** Safeguard requirements have been met satisfactorily. Environmental and social safeguard screening procedures have been well established under the current project and applied to every subproject. The environmental management plan has been executed according to project safeguard requirements.
- (iv) **Management of risk.** The reports and recommendations of the President for the current project identified the following project risks: (a) poor capital investment and budget planning, (b) underdeveloped institutional frameworks and poor capacity, (c) lack of monitoring and evaluation, (d) poor procurement integrity, and (e) weak national contractors. The PMU provided project management and implementation support, and project implementation units successfully managed most of the risks by (a) building the capacity of local government service institutions in investment planning and improved service delivery and operation, (b) supporting institutional change on measuring and improving service delivery performance, (c) adopting a modality for procurement of priority infrastructure improvements to attract better-qualified national contractors, and (d) combining small civil works activities into larger contract packages to generate economies of scale.

5. **Additional financing eligibility criteria met.** ADB's due diligence confirmed that the proposed project meets the eligibility criteria and standards. It is in line with the government's action plan for 2016–2020, which prioritizes the development of infrastructure and services in *aimag* centers.¹⁴ The proposed project is included in ADB's country operations business plan for Mongolia, 2019–2021¹⁵ and is aligned with ADB's country partnership strategy for Mongolia, 2017–2020.¹⁶ With its objective to contribute to inclusive economic and environmentally sustainable growth, the proposed project is aligned with ADB's Strategy 2030 and follows ADB's urban and water operational plans.¹⁷ The additional financing is also consistent with the current project's development objective to expand access to sustainable infrastructure and services in *aimag* urban centers. Further, with the inclusion of the additional financing, the current project remains technically feasible, economically viable, and financially sound.

6. **Additional financing priority met.** The proposed additional financing is for *aimag* centers similar to those in the current project and offers a treatment technology that is identical to the first additional financing. The proposed project has a high degree of readiness:

¹⁴ Government of Mongolia. 2016. *Government Action Plan, 2016–2020*. Ulaanbaatar.

¹⁵ ADB. 2018. *Country Operations Business Plan: Mongolia, 2019–2021*. Manila.

¹⁶ ADB. 2017. *Country Partnership Strategy: Mongolia, 2017–2020—Sustaining Inclusive Growth in a Period of Economic Difficulty*. Manila.

¹⁷ ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila. The proposed project demonstrates alignment with the operational priorities of ADB Strategy 2030 particularly in terms of environmental sustainability and integrated solutions for livable cities.

subprojects are clearly identified and detailed designs have been fully prepared and are ready for approval. This has allowed the required due diligence to be carried out promptly and efficiently, and for feasibility to be firmly established. Because the proposed project will use the management arrangements of the current project, the implementation capacity is well advanced through the PMU's experience with similar technical, economic, financial, and safeguard requirements. The existing PMU's capacity for project management and implementation support to the *aimag* governments, built during the current project, adds to the proposed project's readiness and supports the effective administration of the additional financing. These features will allow the executing agency and ADB to properly and comprehensively mitigate implementation-related risks.

7. **Changes in project scope.** In response to a request from the government, the proposed project will (i) extend the geographical scope of the current project by including the construction of new WWTPs in the additional *aimag* centers of Baruun-Urt, Bulgan City, Chinggis City, Mandalgovi, and Murun;¹⁸ and (ii) extend the institutional reform and capacity building being carried out under the current project to the five additional *aimag* centers. Consequently, the focus of the proposed project's outcome extends to achieving government standards for wastewater discharges and reuse of sewage effluent. The proposed project will contribute to a more balanced national urban system and stronger urban–rural relationships by contributing to the development of second-tier cities in the country. It will also improve environmental conditions and reduce environmental pollution in and around the project cities. The proposed project will support improvements to the cities' wastewater management by building new WWTPs, complemented by support for project management, capacity development, and training.

8. Lessons from the current project on the selection of the treatment technology¹⁹ and the capacity of the plants were incorporated in the proposed project design. Through the current project, useful knowledge has ensured the quality of detailed designs which are completed, saving time on preconstruction activities and increasing the reliability of cost estimates. Valuable experience from the current project will also allow efficient procurement packaging that secures optimal response to tenders and proficient evaluation of contractor capabilities. In addition, the enhanced institutional support and capacity building provided under the proposed project take into consideration similar activities under the first additional financing and their degree of success. Consequently, the proposed use of national consultants to assist the PUSOs is focused on incorporating optimized organizational and management reforms set out under the current project and through previous urban development projects in Mongolia.

B. Impact and Outcome

9. **Project impact and outcomes.** The proposed project's impact and outcomes are aligned with those of the current project. The proposed project is aligned with the following impact: economic development and livability in *aimag* centers (mining and border towns in Southeast Gobi) enhanced.²⁰ The proposed project will have the following outcomes: urban

¹⁸ Since 2014, the Ministry of Construction and Urban Development (MCUD) has been implementing a program to rehabilitate WWTPs across all *aimags*. MCUD selected these five *aimag* centers according to (i) urgency in terms of levels of water pollution and numbers of affected people, and (ii) suitability for replication of technology and design from the current project.

¹⁹ Details on selected technology are in para. 11.

²⁰ National Development and Innovation Committee. 2010. *Infrastructure Development Plans for the Southern Gobi*. Ulaanbaatar; and Government of Mongolia. 2016. *Government Action Plan, 2016–2020*. Ulaanbaatar.

governance improved and access to sustainable infrastructure and services expanded in urban places in Southeast Gobi and other *aimags*.²¹

C. Outputs

10. The proposed project will have the following outputs: (i) wastewater collection and treatment infrastructure constructed and operationalized, delivering effluent that satisfies Mongolian wastewater discharge standards; and (ii) strategic planning, management, and cost recovery for wastewater management strengthened.

11. **Output A: Wastewater collection and treatment infrastructure constructed and operationalized.** The proposed project will establish modern wastewater treatment facilities in the *aimag* centers of Baruun-Urt, Bulgan City, Chinggis City, Mandalgovi, and Murun, replacing the inadequate waste stabilization pond systems. This will be achieved through the construction of new, effective, and energy-efficient treatment processes adopting integrated fixed-film activated sludge (IFAS) technology.²² This system is suitable for the project *aimag* centers' cold climate and will produce effluent that meets national and international standards. The operating capacity of the plants will be 3,000 m³ per day in each of the five *aimag* centers.²³ Based on the findings from the pilot operation carried out under ADB's TA for Management and Reuse of Sewage Sludge from On-Site Sanitation Facilities and Decentralized Wastewater Treatment Plants,²⁴ the project will support the provision of vacuum evacuation trucks to all *aimag* centers to improve *ger* area sanitation and prevent ground and surface water pollution (footnote 4).

12. **Output B: Strategic planning, management, and cost recovery for wastewater management strengthened.** The proposed project will (i) provide expert support for project management, institutional enhancement and capacity development in utility management, operation and service provision, emergency preparedness and response, and construction supervision; and (ii) strengthen PMU and PUSO capacities. Training and study tours will be provided during implementation. The proposed project will include policy dialogue with the PUSOs on water and wastewater tariff reform and sanitation improvements. It will support public awareness campaigns on environmental management and sanitation, as well as improve institutional capacity in utility service provision, strategic planning, and operations.

²¹ The revised design and monitoring framework is in Appendix 1.

²² The IFAS system emerged as the most suitable for use in the project *aimags* as a result of a two-stage evaluation process, which assessed the operational efficiency, cost effectiveness, and robustness of WWTPs of this size under Mongolian conditions. This selection was ratified by a technical committee established by MCUD. The IFAS system has the additional benefits of (i) being the technology proposed for the WWTPs included under the first additional financing project in Arvaikheer, Dalanzadgad, Tsetserleg, and Sainshand; (ii) being the technology proposed for the new ADB-supported treatment plant in Darkhan; and (iii) having been adopted for treatment of wastewater in two *aimag* centers of similar size to the project *aimags* (Sukhbaatar and Zunmod).

²³ This is the capacity that will be fully utilized at the design year 2030. The current and future flows include those for all commercial establishments, businesses, and institutions within the *aimag* centers. In addition, many *ger* dwellers (not connected to the central network) use apartments of friends or family members within the connected areas for bathing.

²⁴ ADB. 2016. *Technical Assistance to Mongolia for the Management and Reuse of Sewage Sludge from On-site Sanitation Facilities and Decentralized Wastewater Treatment Plants*. Manila (TA 9100-MON).

Indicative Activities	2018 (Q)				2019 (Q)				2020 (Q)				2021 (Q)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Activity 2.1 Recruit additional staff for the existing PMU, establish staff local support units in PUSOs and implementation arrangements																
Activity 2.2 Recruit consultants																
Activity 2.3 Project management and implementation support																
Activity 2.4 Institutional development																
Activity 2.5 Provide staff training																
Activity 2.6 Conduct policy dialogue and public awareness campaigns																
Activity 2.7 Develop emergency response plans																
Activity 2.8 Implement and monitor EMP, LARP, and SAP																
Annual/midterm review																
Borrower's project completion report																

EMP = environmental management plan, LARP = land acquisition and resettlement plan, PMU = project management unit, PUSO = public urban service organization, SAP = social action plan, WWTP = wastewater treatment plant.

Source: Asian Development Bank.

III. PROJECT MANAGEMENT ARRANGEMENTS

13. The Ministry of Construction and Urban Development (MCUD) will be the executing agency and the *aimag* Governments will be the implementing agencies for the additional financing project, supported by the existing PMU, which will extend its responsibilities for the current project to include the proposed loan project. Six additional positions including technical positions in the fields of construction management and supervision, procurement, and financial management will be added to strengthen PMU capability. MCUD will nominate a director for the project, and the PMU will continue to be headed by a project coordinator and retain all existing professional and support staff. MCUD will be responsible for overall strategic guidance, technical supervision, and execution of the project and ensuring compliance with loan covenants through the existing steering committee for externally financed urban projects.

14. The project steering committee will provide overall policy guidance on the project and is authorized to make decisions and recommendations to ensure smooth project execution. Implementation of the additional financing project will be carried out by the PMU. At the *aimag* level, the Loan Project will be managed by the MCUD through *aimag* governments and PUSOs as the implementing agency. All *aimag* governments have already established working groups comprising officers from the PUSO and *aimag* government departments to coordinate project-related pre-construction activities and support the project once implementation commences. This contributes to project readiness at the *aimag* level. The PUSO support unit comprising staff assigned to the project part-time will help assist in project supervision. Project due diligence and technical support (DD&TS) will be provided to the PMU through consultants hired under Output B of the project. The

DD&TS consultants will assist the PMU and PUSO support units in project safeguards monitoring and technical matters.

15. Project implementation arrangements (including the establishment of Project Steering Committee) will be in line with the "Regulation on utilization of proceeds of foreign loans of the Government; implementation, administration, financing, monitoring and evaluation of projects and programs funded by such proceeds" approved under Resolution No. 196 of the Minister of Finance of Mongolia, and other relevant regulations that are approved and amended from time to time.

A. Project Implementation Organizations: Roles and Responsibilities

Project Implementation Organizations	Management Roles and Responsibilities
ADB	(i) Oversees project implementation, including compliance by executing and implementing agencies of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures
MOF	(i) Borrower's representative (ii) Negotiates loan and project agreements (iii) Ensures timely provision of project funding (iv) Reviews and approves withdrawal applications (v) Establishes advance accounts in US dollar in commercial bank acceptable to ADB (vi) Ensures annual audit of project accounts
Existing Project Steering Committee (under MCUD)	(i) Chaired by the State Secretary of MCUD (ii) Comprises representatives of MOF, MNET, MCUD, local governments, technical experts, and other agencies (iii) Provides strategic guidance and technical advice (iv) Meets at least once every 3 months until project completion
Executing Agency Ministry of Construction and Urban Development (MCUD)	(i) Responsible for project oversight, coordination with implementing agency, liaison with ADB, financial management, and administration (ii) Supports the project steering committee and technical working group (iii) Provides strategic guidance and technical advice to PMU (iv) Submits progress and safeguards monitoring reports prepared by the PMU for the steering committee for decision making and to ADB (v) Accountable and responsible for proper use of advance accounts' funds (vi) Responsible for procurement of national competitive bidding (NCB) and shopping contracts, consulting services and PMU experts recruitment, disbursement coordination, withdrawal applications, budget allocation monitoring and counterpart funding (vii) Ensures compliance with project covenants (viii) Holds quarterly tripartite meetings with the PMU and project <i>aimags</i> (ix) Ensures that the PMU submits and uploads the relevant documents and reports to MOF in a timely manner
Implementing Agencies <i>Aimag</i> governments and public utility service organizations	(i) Responsible for project implementation including administration, technical matters, monitoring and evaluation, safeguard compliance, and emergency response with assistance from consultants
Existing Project Management Unit (PMU under MCUD)	(i) Responsible for all management, communication, and coordination work during project preparation and implementation (ii) Assists MCUD in procurement of works and equipment and consulting services, and prepares procurement documents for MCUD (iii) Assists MCUD with managing engineering design, works, goods supply, and consulting services contracts (iv) Establishes and maintains project performance management system with support from consultants (v) Updates and submits the final LARP and EMP for ADB approval prior to the award of contracts and implements all required measures with the support of consultants

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> (vi) Secures technical expertise for works prior to bidding and ensures monitoring and quality assurance during construction and installation (vii) Ensures the implementation of the Social and Gender Action Plan (viii) Ensures safeguards monitoring and grievance redress mechanism (ix) Coordinates disbursements with ADB, and prepares disbursement and replenishment withdrawal applications for endorsement by MCUD and MOF (x) Submits progress and audit reports to ADB and the MCUD on time (xi) Maintains project advance accounts (xii) Ensures that relevant project documents and reports are submitted to MOF in a timely manner
Project Support Staff (Assigned from PUSOs)	<ul style="list-style-type: none"> (i) Responsible for project implementation monitoring with assistance from consultants (ii) Assists the PMU and MCUD in procurement of works and equipment for national competitive bidding and for shopping contract packages (iii) Assists the PMU in updating and submitting the final LARP (if any) and EMP for ADB approval prior to award of contracts and implements all required measures (iv) Ensures quality assurance of civil works and equipment installation (v) Ensures safeguards monitoring and grievance redress mechanism (vi) Endorses claims from the contractors and supplying companies

ADB = Asian Development Bank, EMP = environmental management plan, LARP = land acquisition and resettlement plan, MOF = Ministry of Finance, MNET = Ministry of Nature, Environment and Tourism, MCUD = Ministry of Construction and Urban Development, PMU = project management unit, PUSO = public utility service organization.
Source: Asian Development Bank.

B. Key Persons Involved in Implementation

Executing Agency

Ministry of Construction and Urban
Development (MCUD)

Ms. O.Lkhagvatseden
Director
Department of Public Utility Policy Implementation and Coordination
Tel.: +976 99 097 431
Fax: +976 11 322 904
E-mail: lkhagvatseden@mcud.gov.mn
Office Address: Government Bldg. 12
Barilgachdin Talbai 3
Ulaanbaatar 15170
Mongolia

Implementing Agency

MCUD through the following:

Bulgan *aimag* government

Mr. Z. Batzorig
Governor
Tel: +976 99028766
Fax: +976 70322376
Email: info.bulgan.gov.mn
Address: Bulgan *aimag*, Bulgan city, Government building

Dundgovi *aimag* government

Mr. O. Baterdene
Governor
Tel: +976 91114056
Fax: +976 70592895
Email: baterdene@dundgovi.gov.mn
Address: Dundgovi *aimag*, Mandalgovi city, Government building

Khentii *aimag* government

Mr. N. Ganbymba
Governor
Tel: +976 99118163
Fax: +976 70562412
Email: infoazdtg@khentii.gov.mn
Address: Khentii *aimag*, Chinggis city, Government building

Khuvsgul *aimag* government

Mr. L. Ganbold
Governor
Tel: +976 99389999
Fax: +976 70383303
Email: ganbold_1973@yahoo.com
Address: Kuvsgul *aimag*, Murun city, Government building

Sukhbaatar *aimag* government

Mr. J. Erdenebaatar
Governor
Tel: +976 99118163
Fax: +976 70518232
Email: z_enkhtur@yahoo.com
Address: Sukhbaatar *aimag*, Barun-Urt city, Government building

Asian Development Bank

Urban and Social Sectors Division
(EASS)

Mr. Sangay Penjor
Director
Tel.: +63 2 632 6584
Fax: +63 2 636 2407
E-mail: spenjor@adb.org

Mission Leader

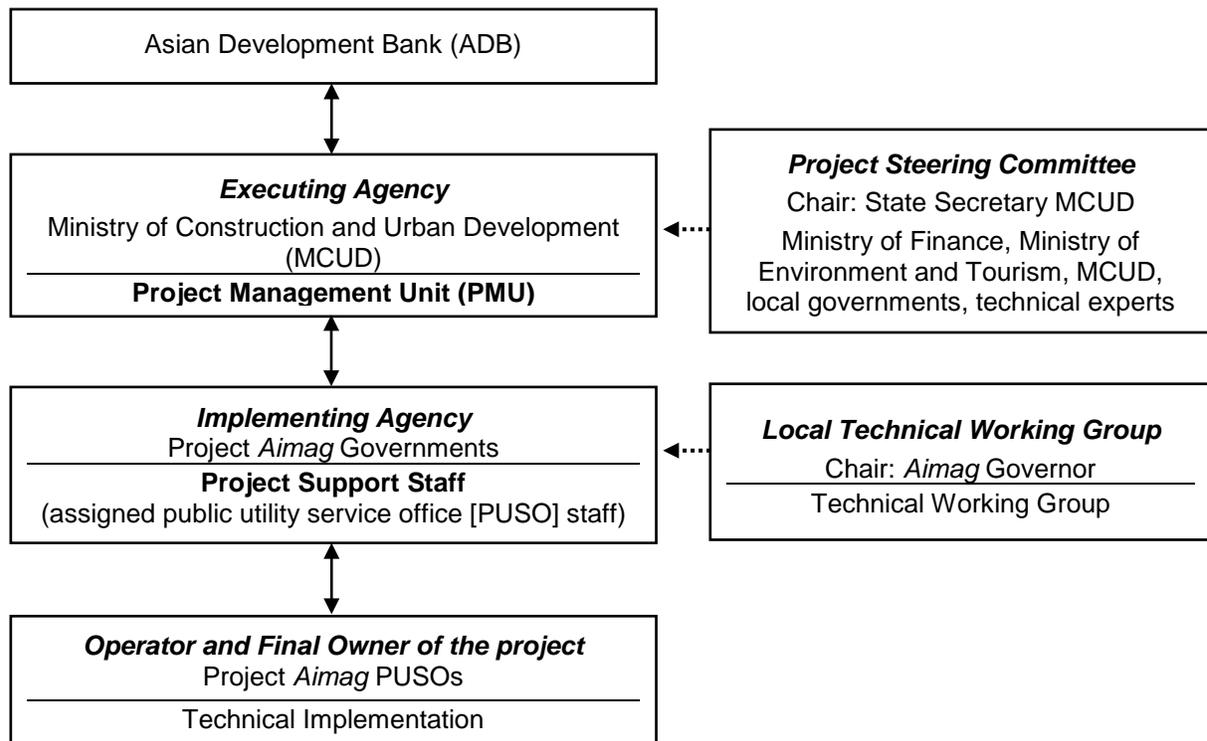
Mr. Antonio Ressano-Garcia
Principal Urban Development Specialist
Tel.: +63 2 632 5661
Fax: +63 2 636 2407
E-mail: aressano@adb.org

Mongolia Resident Mission

Ms. Yolanda Fernandez Lommen
Country Director
Tel.: +976 11 329836
Fax: +976 11 311785
E-mail: yfernandez@adb.org

Co-mission Leader

Ms. Tuul Badarch
Senior Project Officer (Infrastructure)
Tel.: +976 11 329836
Fax: +976 11 311785
E-mail: tbadarch@adb.org

C. Project Organization Structure

IV. COSTS AND FINANCING

A. Cost Estimates

16. This section describes the project cost categories and components to be financed by ADB and the Government of Mongolia for the second additional financing of the Southeast Gobi Urban and Border Town Development Project in Baruun-Urt, Bulgan City, Chinggis City, Mandalgovi, and Murun *aimags*. The project cost categories are in Table 1.

Table 1: Project Cost Categories

Category	Description
Civil Works	Construction of wastewater treatment plants, pump stations, polishing ponds, sewers, administration buildings, and all concreting works; reclamation of existing sludge drying ponds
Materials and Equipment	Acquisition and installation of biofilm media, sludge treatment facility and filters, internal pipe networks, supervisory control and data acquisition control systems and communication links, pumps, power lines and substations, and water and heating lines; procurement of vacuum trucks
Consulting services	Remuneration for due diligence and technical support consultants and institutional reform consultants
Project Management	Project management unit support staff salary, audit, and miscellaneous administration costs including communication, transportation, and office supplies; capacity building and training costs

Source: Asian Development Bank.

B. Key Assumptions

17. The following key assumptions underpin the determination of the cost estimates and financing plan for the project:

- (i) Exchange rate applied is MNT2,465 = \$1.00 (as of 1 March 2018).²⁵
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are, for foreign cost components: 2.6% in 2018, 2.1% in 2019, 2.0% in 2020, 1.9% in 2021, and 1.8% in 2022 and thereafter; and for local cost components: 6.0% in 2018, 5.8% in 2019, 6.7% in 2020, 6.5% in 2021 and thereafter. Local price contingencies are calculated applying purchasing power parity (PPP) based on exchange rate forecasts.

18. The proposed project is estimated to cost \$21.75 million. For the current project, the grant financing (\$21.87 million) and the first additional financing (\$21.17 million) total \$43.04 million. The investment for the proposed project includes physical and price contingencies, financing charges during implementation. Table 2 presents the project investment costs.

²⁵ The rate will be adjusted based on the prevailing exchange rate at the time of loan negotiations.

Table 1: Project Investment Plan
(\$ million)

Item	Current Amount ^a	Additional Financing ^b	Total
A. Base Cost^c			
1. Civil works	25.41	13.74	39.15
2. Materials and equipment	4.43	3.61	8.04
3. Project management and consulting	5.12	1.08	6.20
Subtotal (A)	34.96	18.43	53.39
B. Contingencies^d	7.45	2.03	9.48
C. Financing Charges During Implementation^e	0.63	1.29	1.92
Total (A+B+C)	43.04	21.75	64.79

^a Refers to the grant and first additional financing. Includes taxes and duties of \$3.19 million (\$1.45 million from initial financing and \$1.74 million from additional financing) financed by the government through cash contribution. Such amount does not represent an excessive share of the project cost.

^b Includes taxes and duties of \$1.75 million to be financed by the government through exemption.

^c Current amount includes financing and other charges. The additional financing is based on first quarter of 2018 prices.

^d Current amount is based on actual cost. For the additional financing, physical contingencies are computed at 5% for works and goods. Price contingencies for foreign cost components are 2.6% in 2018, 2.1% in 2019, 2.0% in 2020, 1.9% in 2021, and 1.8% in 2022, and thereafter; and for local cost components, 6.0% in 2018, 5.8% in 2019, 6.7% in 2020, 6.5% in 2021, and thereafter; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^e Includes interest and commitment charges. Interest during construction for a regular ordinary capital resources loan has been computed at the 5-year US dollar fixed swap rate plus an effective contractual spread of 0.5% and maturity premium of 0.1%. Commitment charges for a regular ordinary capital resources loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

C. Revised Project and Financing Plan

19. The government has requested a regular loan of \$20.00 million from ADB's ordinary capital resources to help finance the proposed project. The loan will have a 25-year term, including a grace period of 6 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 other charges during construction to be capitalized in the loan); and such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line repayment method, the average maturity is 15.75 years, and the maturity premium payable to ADB is 0.10% per year. The government will finance 100% of the taxes and duties totaling \$1.75 million. The financing plan of the current project and additional financing is in Table 3.

Table 3: Financing Plan
(\$ million)

Item	Current ^a		Additional Financing		Total	
	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)
Asian Development Bank	34.43	80	20.00	92	54.43	84
Special Funds resources (loan)	19.43	45			19.43	30
Special Funds resources (grant)	15.00	35			15.00	23
Ordinary capital resources (loan)			20.00	92	20.00	31
Government of Mongolia (<i>aimag</i>)	8.61	20	1.75	8	10.36	16
Total	43.04	100	21.75	100	64.79	100

Source: Asian Development Bank estimates.

20. The Government will relend the proceeds of the loan to *aimag* governments under a subsidiary loan agreement on the terms and conditions satisfactory to ADB and in accordance with the loan and project agreements.

D. Detailed Cost Estimates by Expenditure Category

Item	(MNT million) ^a			(\$ million) ^b			% of Base Cost	% of Total Cost
	Foreign Currency	Local Currency	Total Cost	Foreign Currency	Local Currency	Total Cost		
A. Investment Cost								
1. Wastewater Treatment Plant								
1.1. Civil Works	6,726	10,194	16,920	2.73	4.14	6.86	37.3	31.6
1.2. Materials and Equipment	3,985	558	4,543	1.62	0.23	1.84	10.0	8.5
1.3. Commissioning Costs	402	938	1,340	0.16	0.38	0.54	3.0	2.5
Subtotal (1)	11,113	11,689	22,802	4.51	4.74	9.25	50.2	42.5
2. Additional Works								
2.1. Mains, Pumps	2,637	1,109	3,746	1.07	0.45	1.52	8.2	7.0
2.1.1. Civil Works	1,316	963	2,278	0.53	0.39	0.92	5.0	4.2
2.1.2. Materials and Equipment	1,321	147	1,468	0.54	0.06	0.60	3.2	2.7
2.2. Power, Heating, Admin, SCADA	8,934	7,271	16,205	3.62	2.95	6.57	35.7	30.2
2.2.1. Civil Works	6,331	6,982	13,314	2.57	2.83	5.40	29.3	24.8
2.2.2. Materials and Equipment	2,602	289	2,891	1.06	0.12	1.17	6.4	5.4
Subtotal (2)	11,571	8,381	19,952	4.69	3.40	8.09	43.9	37.2
3. Project Management and Institutional								
3.1. PMIS and Institutional Reform	275	642	917	0.11	0.26	0.37	2.0	1.7
3.2. PMU Support	524	1,223	1,748	0.21	0.50	0.71	3.8	3.3
Subtotal (3)	799	1,865	2,665	0.32	0.76	1.08	5.9	5.0
Subtotal (A)	23,483	21,936	45,419	9.53	8.90	18.43	100.0	84.7
B. Contingencies ^c								
1. Physical	1,063	993	2,055	0.43	0.40	0.83	4.5	3.8
2. Price	1,056	1,917	2,973	0.43	0.78	1.21	6.5	5.5
Subtotal (B)	2,119	2,909	5,028	0.86	1.18	2.04	11.1	9.4
C. Financing Charges During Implementation ^d								
1. Interest During Construction	3,065	–	3,065	1.24	–	1.24	6.7	5.7
2. Commitment Fees	104	–	104	0.04	–	0.04	0.2	0.2
Subtotal (C)	3,169	–	3,169	1.29	–	1.29	7.0	5.9
Total Project Cost (A+B+C)	28,771	24,845	53,616	11.67	10.08	21.75	118.0	100.0

PMIS = Project Management and Implementation Support, PMU = project management unit, SCADA = supervisory control and data acquisition.

Note: Numbers may not sum precisely because of rounding.

^a Includes taxes and duties of \$1.75 million to be financed from government and Asian Development Bank (ADB) loan resources.

^b In Q1 2018 prices and an exchange rate of \$1 = MNT2,465.

^c Physical contingencies are computed at 5% for works and goods. Price contingencies for foreign cost components are at 2.6% in 2018, 2.1% in 2019, 2.0% in 2020, 1.9% in 2021, and 1.8% in 2022 and thereafter; and for local cost components, 6.0% in 2018, 5.8% in 2019, 6.7% in 2020, 6.5% in 2021 and thereafter. Local inflation rates applied follow purchasing power parity method.

^d Includes interest charges computed at 3.4%. Repayment period is 25 years with a 6-year grace period.

Source: Asian Development Bank estimates.

E. Allocation and Withdrawal of Loan Proceeds

ALLOCATION AND WITHDRAWAL OF LOAN PROCEEDS			
Number	Item	Total Amount Allocated for ADB Financing (\$)	Basis for Withdrawal from the Loan Account ^a
		Category	
1	Project Costs**	18,710,000	100% of total expenditure claimed*
2	Interest and Commitment Charges	1,290,000	100% of amounts due
TOTAL		20,000,000	

* Exclusive of taxes and duties imposed within the territory of the Borrower.

** Subject to condition provided in para. 6 of Schedule 3 of the Loan Agreement.

Source: Asian Development Bank.

F. Detailed Cost Estimates by Financier (\$ million)

Item	Total Cost ^a	ADB		Government/Aimag ^b	
		Amount	% Cost Category	Amount	% Cost Category
A. Investment Cost					
1. Wastewater Treatment Plant					
1.1. Civil Works	6.86	6.21	90.5	0.65	9.5
1.2. Materials and Equipment	1.85	1.67	90.5	0.18	9.5
1.3. Commissioning Costs	0.54	0.49	90.5	0.05	9.5
Subtotal (1)	9.25	8.37	90.5	0.88	9.5
2. Additional Works					
2.1. Mains, Pumps	1.52	1.37	90.5	0.14	9.5
2.1.1. Civil Works	0.92	0.84	90.5	0.09	9.5
2.1.2. Materials and Equipment	0.60	0.54	90.5	0.06	9.5
2.2. Power, Heating, Admin, SCADA	6.57	5.95	90.5	0.62	9.5
2.2.1. Civil Works	5.40	4.89	90.5	0.51	9.5
2.2.2. Materials and Equipment	1.17	1.06	90.5	0.11	9.5
Subtotal (2)	8.09	7.33	90.5	0.77	9.5
3. Project Management and Institutional					
3.1. PMIS and Institutional Reform	0.37	0.34	90.5	0.04	9.5
3.2. PMU Support	0.71	0.64	90.5	0.07	9.5
Sub-total (3)	1.08	0.98	90.5	0.10	9.5
Sub-total (A)	18.43	16.68	90.5	1.75	9.5
B. Contingencies ^c					
1. Physical	0.83	0.83	100.0	–	–
2. Price	1.21	1.20	100.0	–	–
Sub-total (B)	2.04	2.04	100.0	–	–
C. Financing Charges During Implementation ^d					
1. Interest During Construction	1.24	1.24	100.0	–	–
2. Commitment Fees	0.04	0.04	100.0	–	–
Sub-total (C)	1.29	1.29	100.0	–	–
Total Project Cost (A+B+C)	21.75	20.00	92.0	1.75	8.0

PMIS = project Management and implementation Support, PMU = project management unit, SCADA = supervisory control and data acquisition.

Source: Asian Development Bank estimates.

G. Detailed Cost Estimates by Outputs (\$ million)

Item	Total Cost ^a	Wastewater Treatment Plant		Additional Works and On-site Services		PMIS, Safeguards, Institutional		PMU Support	
		Amount	% Cost Category	Amount	% Cost Category	Amount	% Cost Category	Amount	% Cost Category
A. Investment Cost									
1. Wastewater Treatment Plant									
1.1. Civil Works	6.86	6.86	100.0		0.0		0.0		0.0
1.2. Materials and Equipment	1.84	1.84	100.0		0.0		0.0		0.0
1.3. Commissioning Costs	0.54	0.54	100.0		0.0		0.0		0.0
Subtotal (1)	9.25	9.25	100.0	–	0.0	–	0.0	–	0.0
2. Additional Works									
2.1. Mains, Pumps	1.52	–	0.0	1.52	100.0	–	0.0	–	0.0
2.1.1. Civil Works	0.92		0.0	0.92	100.0		0.0		0.0
2.1.2. Materials & Equipment	0.60		0.0	0.60	100.0		0.0		0.0
2.2. Power, Heating, Admin, SCADA	6.57	–	0.0	6.57	100.0	–	0.0	–	0.0
2.2.1. Civil Works	5.40		0.0	5.40	100.0		0.0		0.0
2.2.2. Materials and Equipment	1.17		0.0	1.17	100.0		0.0		0.0
Subtotal (2)	8.09	–	0.0	8.09	100.0	–	0.0	–	0.0
3. Project Management and Institutional									
3.1. PMIS and Institutional Reform	0.37		0.0		0.0	0.37	100.0		0.0
3.2. PMU Support	0.71		0.0		0.0		0.0	0.71	100.0
Subtotal (3)	1.08	–	0.0	–	0.0	0.37	34.4	0.71	65.6
Subtotal (A)	18.43	9.25	50.2	8.09	43.9	0.37	2.0	0.71	3.8
B. Contingencies ^b									
1. Physical	0.834	0.42	50.2	0.37	43.9	0.02	2.0	0.03	3.8
2. Price	1.206	0.62	51.5	0.49	40.8	0.03	2.7	0.06	5.1
Sub-total (B)	2.04	1.04	51.0	0.86	42.1	0.05	2.4	0.09	4.6
C. Financing Charges During Implementation ^c									
1. Interest During Construction	1.24	0.63	51.0	0.52	42.1	0.03	2.4	0.06	4.6
2. Commitment Fees	0.04	0.02	51.0	0.02	42.1	0.00	2.4	0.00	4.6
Sub-total (C)	1.29	0.66	51.0	0.54	42.1	0.03	2.4	0.06	4.6
Total Project Cost (A+B+C)	21.75	10.95	50.3	9.49	43.6	0.45	2.1	0.86	4.0

PMIS = Project Management and Implementation Support, PMU = project management unit, SCADA = supervisory control and data acquisition.

Note: Numbers may not sum precisely because of rounding.

^a In Q1 2018 prices and an exchange rate of \$1 = MNT2,465. Includes taxes and duties.

^b Physical contingencies are computed at 5% for works and goods. Price contingencies for foreign cost components are at 2.6% in 2018, 2.1% in 2019, 2% in 2020, 1.9% in 2021, and 1.8% in 2022 and thereafter; and for local cost components, 6% in 2018, 5.8% in 2019, 6.7% in 2020, 6.5% in 2021 and thereafter. Local inflation rates applied follow PPP method.

^c Includes interest charges computed at 3.4%. Repayment period is 25 years with a 6-year grace period.

Source: Asian Development Bank estimates.

H. Detailed Cost Estimates by Year (\$ million)

Item	Total ^a	2019 Year 1	2020 Year 2	2021 Year 3	2022 Year 4	2023 Year 5
A. Investment Cost						
1. Wastewater Treatment Plant						
1.1. Civil Works	6.86	1.37	3.43	2.06	–	–
1.2. Materials and Equipment	1.84	–	1.29	0.55	–	–
1.3. Commissioning Costs	0.54	–	0.27	0.16	0.11	–
Subtotal (1)	9.25	1.37	4.99	2.78	0.11	–
2. Additional Works						
2.1. Mains, Pumps	1.52	0.18	0.88	0.46	–	–
2.1.1. Civil Works	0.92	0.18	0.46	0.28	–	–
2.1.2. Materials and Equipment	0.60	–	0.42	0.18	–	–
2.2. Power, Heating, Admin, SCADA	6.57	1.31	3.52	1.74	–	–
2.2.1. Civil Works	5.40	1.08	2.70	1.62	–	–
2.2.2. Materials & Equipment	1.17	0.23	0.82	0.12	–	–
Subtotal (2)	8.09	1.50	4.40	2.19	–	–
3. Project Management and Institutional						
3.1. PMIS and Institutional Reform	0.37	0.06	0.15	0.11	0.06	–
3.2. PMU Support	0.71	0.11	0.28	0.21	0.11	–
Subtotal (3)	1.08	0.16	0.43	0.32	0.16	–
Subtotal (A)	18.43	3.03	9.83	5.29	0.27	–
B. Contingencies ^b						
1. Physical	0.83	0.14	0.44	0.24	0.01	–
2. Price	1.21	0.09	0.58	0.50	0.04	–
Sub-total (B)	2.04	0.22	1.03	0.74	0.05	–
C. Financing Charges During Implementation ^c						
1. Interest During Construction	1.24	0.05	0.22	0.32	0.33	0.33
2. Commitment Fees	0.04	0.03	0.01	0.00	0.00	0.00
Sub-total (C)	1.29	0.08	0.23	0.32	0.33	0.33
Total Project Cost (A+B+C)	21.75	3.33	11.08	6.35	0.65	0.33

PMIS = project management and implementation support, PMU = project management unit, SCADA = supervisory control and data acquisition.

Note: Numbers may not sum precisely because of rounding.

^a In Q1 2018 prices and an exchange rate of \$1 = MNT2,465. Includes taxes and duties.

^b Physical contingencies are computed at 5% for works and goods. Price contingencies for foreign cost components are at 2.6% in 2018, 2.1% in 2019, 2% in 2020, 1.9% in 2021, and 1.8% in 2022 and thereafter; and for local cost components, 6% in 2018, 5.8% in 2019, 6.7% in 2020, 6.5% in 2021 and thereafter. Local inflation rates applied follow PPP method.

^c Includes interest charges computed at 3.4%. Repayment period is 25 years with a 6-year grace period.

Source: Asian Development Bank estimates.

I. Contract and Disbursement S-Curve

21. The projected contract awards and disbursements under the loan for the project and the corresponding S-curve are presented below.

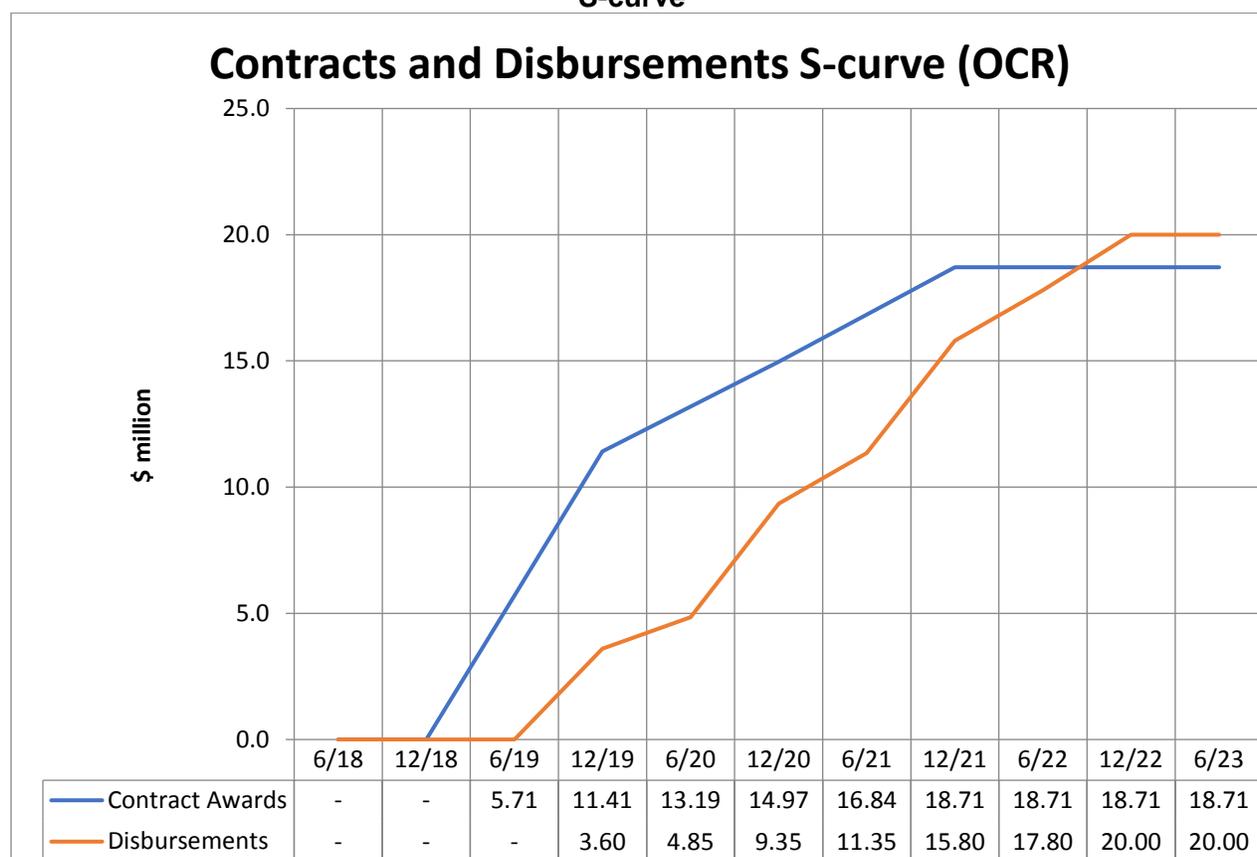
Schedule of Disbursement and Contract Awards – Ordinary Capital Resources (\$ million)

Year	Contract Awards					Disbursements				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2019	0.00	5.70	2.85	2.84	11.39	0.00	0.00	1.60	2.00	3.60
2020	0.89	0.89	0.89	0.89	3.56	0.00	1.25	2.00	2.50	5.75
2021	0.94	0.94	0.94	0.94	3.76	0.70	1.30	1.70	2.75	6.45
2022	0.00	0.00	0.00	0.00	0.00	0.50	1.50	1.55	0.65	4.20
Total	1.83	7.53	4.68	4.67	18.71	1.20	4.05	6.85	7.90	20.00

^a Excludes interest during construction.

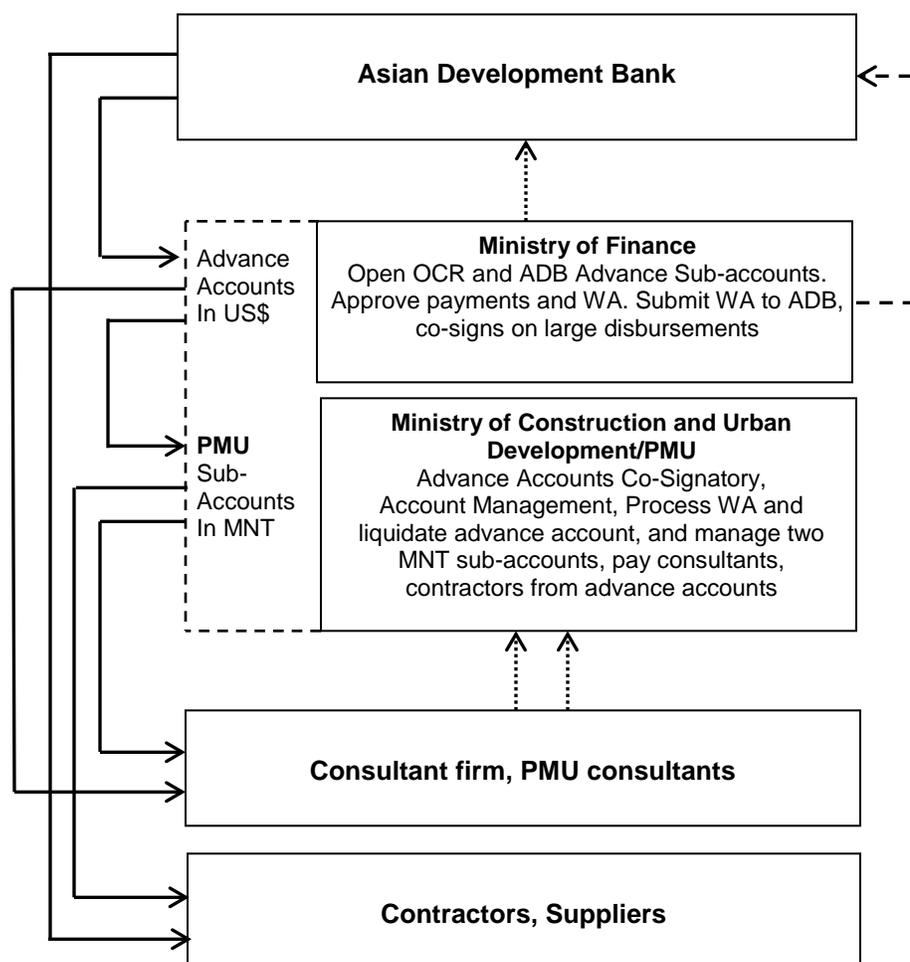
Source: Asian Development Bank estimates.

S-curve



Source: Asian Development Bank estimates.

J. Fund Flow Diagram



Legend:

- Loan proceeds disbursement
- ← - - - - - Loan repayment
- ← ··········· Claims/withdrawal applications

ADB = Asian Development Bank, OCR = ordinary capital resources, PMU = project management unit, WA = withdrawal application.
Source: ADB.

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

22. Financial management assessment (FMA) was conducted from December 2017 to February 2018.²⁶ The FMA assessed the capacity of the *aimags* and PUSOs in project funds-flow

²⁶ ADB. 2005. *Guidelines for the Financial Management and Analysis of Projects*. Manila; and ADB. 2009. *Financial Due Diligence: A Methodology Note*. Manila.

arrangements, accounting and financial reporting, information systems, and internal and external auditing. Findings show all five *aimags* have experience implementing international donor-funded projects including several projects related to water supply and wastewater treatment, i.e., either ADB-funded projects in Mongolia.²⁷ *Aimags* accounting and financial management systems are computerized, using software for budget planning, accounts consolidation, and reporting. The *Aimags* Audit Office undertakes monitoring and evaluation periodically. *Aimags* transactions are made through the State Bank. Likewise, all five PUSOs have experience implementing foreign-funded projects. For accounting and reporting purposes PUSOs use “Vinnica” software. As license holders of the Water Services Regulatory Commission (WSRC)²⁸, all PUSOs are required to report financial statements quarterly and ensure that good monitoring and control mechanisms are in place. Audit is performed by an independent auditor. PUSOs are free to open accounts in any commercial banks.

23. Based on the assessment, the key financial management risks identified are limited staffing in the *aimags* and PUSOs, and the need to enhance staff familiarity with ADB financial management policies and procedures. Taking in to considerations the financial management risk ratings in relevant financial management indicator categories, the capacity and suitability of the executing agency and implementing agencies to utilize advance fund and SOE procedures, and appropriateness of the proposed Advance Fund limit and SOE procedures with the proposed ceiling for individual transaction limit, the FMA rates the overall pre-mitigation financial management risk of the *aimags* and PUSOs as *moderate*; however, financial and accounting personnel of the entities require training on specific ADB disbursement guidelines and procedures. Online training for project staff on disbursement policies and procedures is available.²⁹ Executing agency and PMU staff are also encouraged to avail of this training to help upgrade efficiencies in project disbursement and fiduciary control.

B. Disbursement

24. Loan proceeds will be disbursed in accordance with ADB’s *Loan Disbursement Handbook* (2017, as amended from time to time),³⁰ and detailed arrangements agreed upon between the government and ADB. Disbursements from the loan proceeds will be in accordance with the Allocation and Withdrawal of Loan Proceeds specified in the loan agreement.

25. **Advance fund procedure.** To facilitate project implementation and funds flow to ADB upon loan effectiveness, an advance account will be established and maintained by MOF. The currency of the advance account is in US dollar. The advance account is to be used exclusively for ADB’s share of eligible expenditures. MCUD, through the PMU, who administers the advance account is accountable and responsible for proper use of advances from the advance account. Sub-accounts in local currency are to be established by the *aimags* governments and administered through the PMU. Sub-accounts in local currency are established under the Treasury Single Account (TSA) of MOF. Currently, MOF is working towards enabling the establishment of USD

²⁷ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for Mongolia for Integrated Development of Basic Urban Services in Provincial Towns Project*. Manila; ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for Mongolia to the Urban Development Sector Project*. Manila.

²⁸ The WSRC was established through the Law on Utilization of Urban Settlement’s Water Supply and Sewerage and in accordance with the Government Resolutions No. 46 and No. 183 on 30 May 2012. Its main duties are to define the water and wastewater tariffs for each of the 21 *aimags* plus Ulaanbaatar (and the respective 34 public utilities) and to issue special licenses to legal entities in the water sector. Since 2014, the WSRC in tandem with the Competition and Consumer Rights Agency, has been gradually instituting tariff reforms.

²⁹ Disbursement eLearning. http://wpqr4.adb.org/disbursement_elearning.

³⁰ Available at <https://www.adb.org/sites/default/files/adb-loan-disbursement-handbook-2017.pdf>.

accounts under the TSA. Once this effort is fully in place, MOF will transfer all USD accounts to TSA upon consultation with ADB. Until this is fully introduced, advance accounts will be established under a commercial bank.

26. The total outstanding advance to the advance account should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. MOF may request for initial and additional advances to the advance account based on an Estimate of Expenditure Sheet setting out the estimated expenditures to be financed through the account for the forthcoming 6 months. Supporting documents should be submitted to ADB or retained by MOF, executing agency, and implementing agencies in accordance with ADB's Loan Disbursement Handbook when liquidating or replenishing the advance account.

27. **Statement of expenditure procedure.** The statement of expenditure (SOE) procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the advance account. The ceiling of the SOE procedure is the equivalent of \$500,000 per individual payment. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit. Reimbursement and liquidation of individual payments in excess of the SOE ceiling should be supported by full documentation when submitting the withdrawal application to ADB.

28. **Condition for withdrawals from loan account.** Notwithstanding any other provision of the Loan Agreement, no withdrawals shall be made from the Loan Account until the Borrower has confirmed to ADB in writing that the Subsidiary Loan Agreement(s), on terms and conditions consistent with the Loan Agreement has been duly executed by the Borrower's authorized agency and the *Aimag* Governments, and has become effective and binding upon the parties hereto.

29. Before the submission of the first withdrawal application (WA), the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per WA is stipulated in the *Loan Disbursement Handbook* (2017, as amended from time to time). Individual payments below such amount should be paid by (i) the executing agency and subsequently claimed to ADB through reimbursement; or (ii) from the advance fund procedure, unless otherwise accepted by ADB. The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements system is encouraged for submission of withdrawal applications to ADB.³¹

30. For the counterpart funds, the PMU shall cause the implementing agencies to allocate the designated funding for the project as indicated in the loan and project agreements. Counterpart funds from the government will be disbursed and liquidated by the implementing agencies to contractors, suppliers, and service providers. The disbursement procedures will follow the local financial management practices by each counties and cities.

C. Accounting

31. The executing agency will maintain, or cause to be maintained, separate books and

³¹ The CPD facilitates online submission of WA to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

records by funding source for all expenditures incurred on the project following International Public Sector Accounting Standard for cash-based accounting principles and practices acceptable to ADB. The PMU, on behalf of the executing agency, will maintain separate project accounts and records by funding source for all expenditures incurred on the project.

D. Auditing and Public Disclosure

32. The executing agency will cause the detailed consolidated project financial statements to be audited in accordance with Mongolia's national auditing standards by an independent auditor acceptable to ADB. The audited consolidated project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the executing agency.

33. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).

34. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

35. The executing agency, and implementing agencies have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.³² ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

36. Public disclosure of the audited consolidated project financial statements, including the auditor's opinion, will be guided by ADB's Public Communications Policy 2011.³³ After the review, ADB will disclose the audited consolidated project financial statements and the opinion of the auditors no later than 14 days of ADB's confirmation of their acceptability by posting them on

³² ADB's approach and procedures regarding delayed submission of audited project financial statements are as follows:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

³³ Public Communications Policy. <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.³⁴

VI. PROCUREMENT AND CONSULTING SERVICES

A. Procurement of Goods, Works, and Consulting Services

37. All procurement of goods, works and consulting services financed from the ADB loan will be carried out in accordance with ADB's Procurement Guidelines (2015, as amended from time to time).³⁵ Contracts for civil works valued at more than \$100,000 and less than \$5,000,000; and contracts for goods and related services valued at more than \$100,000 or less than \$2,000,000 will be procured through national competitive bidding procedures (NCB). The NCB will be undertaken in accordance with standard government procedures subject to modifications agreed with ADB. Contract packages for civil works and goods valued at less than \$100,000 will be awarded through shopping procedure. Relevant sections of ADB's Anticorruption Policy (1998, as amended to date) will be included in all procurement documents and contracts. Any tendered equipment packages will include the necessary technical support to ensure proper installation, testing, commissioning, and training of operational staff as part of the related contracts. The selection and engagement of contractors for works, goods, and/or consulting services to be financed by ADB loan will be subject to ADB approval.

38. A procurement plan indicating the thresholds and review procedures; contract packages for goods, works, and consulting services; and NCB procedures is provided in Section B below. Any necessary modifications or clarifications to the recipient procurement procedures will be documented in the procurement plan.

39. For procurement of goods and works, the PMU will follow ADB's Procurement Guidelines and undertake procurement in accordance with established commercial practices acceptable to the government and ADB. To be acceptable, the PMU will (i) demonstrate that procedures are appropriate in the circumstances; (ii) ensure that goods and services financed using project funds are purchased with consideration to economy and efficiency at a reasonable price, given time of delivery, quality, and efficiency; and (iii) ensure that goods and services to be financed by project funds are procured from ADB member countries. The PMU is encouraged to procure goods and works through national competitive bidding and shopping, where applicable in the interest of economy and efficiency. The PMU staff are considered to have gained adequate experience in carrying out procurement activities undertaken under the ongoing project.

40. The project is expected to require a total of 145 person-months of consultancy inputs to support project management and implementation, and to support institutional development and capacity building of the PUSOs. The PMU, on behalf of the executing agency will engage consultants for project management and implementation support through quality- and cost-based selection (QCBS) methods and for capacity building and institutional development through individual consultant selection (ICS) method. All consultants hired under the project and to be financed by ADB will be engaged following ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The terms of reference of the consultants are in Section D.

³⁴ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraph 97(iv) and/or 97(v).

³⁵ <http://www.adb.org/documents/procurement-guidelines>.

B. Procurement Plan

Basic Data

Project Name: Southeast Gobi Urban and Border Town Development Project (Additional Financing)	
Project Number: 42184-027	Approval Number: TBD
Country: Mongolia	Executing Agency: Ministry Construction and Urban Development
Project Procurement Classification:	Implementing Agency: Not applicable
Procurement Risk: Low	
Project Financing Amount: \$21,750,000 ADB Financing: \$20,000,000 Co-financing (ADB Administered): Non-ADB Financing: \$1,750,000	Project Closing Date: 30 June 2022
Date of First Procurement Plan 16 May 2018	Date of this Procurement Plan: 16 May 2018

1. Methods, Thresholds, Review and 18-Month Procurement Plan

a. Procurement and Consulting Methods and Thresholds

41. Except as the Asian Development Bank (ADB) may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

Procurement of Goods and Works		
Method	Threshold	Comments
International Competitive Bidding for Works	\$5,000,000 and above	Prior review
National Competitive Bidding for Goods	Between US\$100,000 and US\$1,999,999	The first NCB is subject to prior review, thereafter post review.
Shopping for Goods	Up to US\$99,999	Post review
International Competitive Bidding for Goods	US\$2,000,000 and Above	Prior review
National Competitive Bidding for Works	Between US\$100,000 and US\$4,999,999	The first NCB is subject to prior review, thereafter post review
Shopping for Works	Up to US\$99,999	Post review

Consulting Services	
Method	Comments
Quality- and Cost- Based Selection	Quality-cost ratio 90:10/prior review
Individual Consultant Selection	Prior or post review

b. Goods and Works Contracts Estimated to Cost \$1 Million or More

42. The following table lists goods and works contracts for which the procurement activity is expected to commence within the next 18 months.

Package Number	General Description	Estimated Value ^a	Procurement Method	Review [Prior / Post/Post (Sample)]	Bidding Procedure	Advertisement Date (quarter/year)	Comments
A1.2	WWTP and ancillary services (i) Construction of WWTP: inlet works, main reactor and other structural components and installation of aeration and related equipment for an IFAS wastewater treatment process including build and operation support for 3 years; and (ii) provision of associated trunk sewer main, power line, substation and SCADA link in Dundgovi <i>aimag</i>	\$3.08 million	NCB	Post	1S1E	Q4/2019	Works
A1.3	WWTP and ancillary services (i) Construction of WWTP: inlet works, main reactor and other structural components and installation of aeration and related equipment for an IFAS wastewater treatment process including build and operation support for 3 years; and (ii) provision of associated trunk sewer main, power line and sub-station in Khentii <i>aimag</i> .	\$3.79 million	NCB	Post	1S1E	Q1/2019	Works
A1.4	WWTP and ancillary services (i) Construction of WWTP: inlet works, main reactor and other structural components and installation of aeration and related equipment for an IFAS wastewater treatment process including build and operation support for 3 years; and (ii) provision of associated trunk sewer main and power line in Kuvsgul <i>aimag</i> .	\$4.37 million	NCB	Prior	1S1E	Q4/2018	Works
A1.5	WWTP and ancillary services (i) Construction of WWTP: inlet works, main reactor and other structural components and installation of aeration and related equipment for an IFAS wastewater treatment process including build and operation support for 3 years; and (ii) provision of associated trunk sewer main and power line in Sukhbaatar <i>aimag</i> .	\$4.16 million	NCB	Post	1S1E	Q3/2019	Works

IFAS = integrated fixed-film activated sludge, NCB = national competitive bidding, SCADA = supervisory control and data acquisition, WWTP = waste water treatment plant.

^a Cost estimates are exclusive of taxes and duties.

c. Consulting Services Contracts Estimated to Cost \$100,000 or More

43. The following table lists consulting services contracts for which the recruitment activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value ^a	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
B.1	Due Diligence and Technical Support Consultants. Project safeguards, due diligence, quality assurance, monitoring and evaluation, and technical support	\$ 0.117 million	ICS	Prior	Q3/2018	N/A	National
B.2	Institutional Development and Capacity Building. OHRD and Capacity Building support for the extension project <i>aimag</i> governments and PUSOs	\$ 0.218 million	QCBS	Prior	Q3/2018	FTP	National quality/cost ratio: 90/10
B.3	Construction Supervision consultants. PUSO Support Unit Supervision Engineers	\$ 0.135 million	ICS	Prior	Q4/2018	N/A	National

ICS = individual consultant selection, FTP = full technical proposal, N/A = OHRD = Organizational and Human Resource Development, PUSO = public utility service organization, QCBS = quality- and cost-based selection, SCADA = supervisory control and data acquisition.

^a Cost estimates are exclusive of taxes and duties.

2. Indicative List of Packages Required Under the Project

44. The following table provides an indicative list of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period).

Package Number	General Description	Estimated Value ^a	Estimated Number of Contracts	Procurement Method	Review [Prior / Post/ Post (Sample)]	Bidding Procedure	Comments
A1.1	WWTP and ancillary services (i) Construction of WWTP: inlet works, main reactor and other structural components and installation of aeration and related equipment for an IFAS wastewater treatment process including build and operation support for 3 years; and (ii) provision of associated trunk sewer main and power line in Bulgan <i>aimag</i>	\$3.88 million	1	NCB	Prior	1S1E	Works Q1/2020
C.1	Supply of sludge vacuum trucks	\$0.250 million		NCB	Post	1S1E	Goods Q4/2020

IFAS = integrated fixed-film activated sludge, NCB = national competitive bidding, WWTP = wastewater treatment plant.

^a Cost estimates are exclusive of taxes and duties.

3. National Competitive Bidding

45. The procedures to be followed for national competitive bidding shall be those set forth in the Public Procurement Law of Mongolia of 1 December 2005, effective 1 February 2006, as amended on 6 February 2007 and 16 July 2009 (hereinafter referred to as PPLM), with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of ADB's Procurement Guidelines.

- (i) The Standard Bidding Documents of Mongolia for Goods and Works that have been approved by ADB as acceptable for ADB-financed projects, together with ADB's clarifications and modifications thereto shall be used.
- (ii) Government-owned enterprises in Mongolia shall be eligible for projects only if they can establish that they (a) are legally and financially autonomous, (b) operate under the principles of commercial law, and (c) are not dependent agencies of the executing agency and/or the implementing agency.
- (iii) If a bid security is required, the bid security shall be in any of the following forms at the bidder's option: (a) a bank guarantee or (b) a cashier's or certified check.
- (iv) Bidders must be nationals of member countries of ADB and offered Goods and Works must be produced in and supplied from member countries of ADB. Bidders or potential bidders shall not be required to register with the taxation and other registration authorities of the government as a condition or requirement of bidding or award, leaving these requirements for after award and before signing of contract. Foreign bidders from eligible countries of ADB shall be allowed to participate in bidding under the same conditions as local bidders and without any domestic preference.
- (v) Prequalification shall not be required, except in the case of large or complex works, and with prior written concurrence of ADB.
- (vi) Qualification criteria shall be clearly specified in the bidding documents, and all criteria so specified shall be used to determine whether a bidder is qualified. The evaluation of a bidder's qualifications shall only take into account the bidder's capacity and resources to perform the contract, in particular its experience and past performance on similar contracts, capabilities with respect to personnel, equipment and construction or manufacturing facilities, and financial position. The evaluation of the bidder's qualifications shall be conducted separately from the technical and commercial evaluation of the bid.
- (vii) Evaluation and qualification criteria, and submission requirements, to be used in each bidding activity shall be clearly specified in the bidding documents. The evaluation of bids shall be done in strict adherence to the criteria specified in the bidding documents.
- (viii) The invitation to bid and the bidding documents shall be prepared in the Mongolian language. If another language will be used, then such other language shall be English.
- (ix) Bidders shall be requested to extend the validity of their bids only under exceptional circumstances and the executing or implementing agency, as the case may be, shall communicate such request for extension to all bidders before the date of expiry of their bids. When the procurement is subject to ADB's prior review, the executing or implementing agency, as the case may be, shall obtain in a timely manner the prior written concurrence of ADB for the extension of the bid validity period.
- (x) All bids shall not be rejected or new bids invited without ADB's prior written concurrence. No bid shall be rejected merely on the basis of a comparison with the

- estimated cost or budget ceiling without ADB's prior written concurrence (with specific reference to Article 30 of the PPLM).
- (xi) Negotiations with bidders shall not be undertaken before award of contract, except as provided in Paragraph 2.63 of ADB's Procurement Guidelines (with specific reference to Article 30.2 of the PPLM). A bidder shall not be required, as a condition for award, to undertake obligations not specified in the bidding documents or otherwise to modify its bid as originally submitted.
 - (xii) Bidding documents and contracts under national competitive bidding procedures financed by ADB shall include a provision requiring suppliers, contractors and consultants to permit ADB to inspect their accounts and records relating to the bid submission and the performance of the contract by the supplier, contractor and/or consultant, as the case may be, and to have them audited by auditors appointed by ADB, if so required by ADB.
 - (xiii) At the same time that notification on award of contract is given to the successful bidder, the results of the bid evaluation shall be posted on a well-known freely accessible website (i.e., the Mongolia's Ministry of Finance e-procurement website: www.e-procurement.mn) identifying the bid and lot numbers and providing information on the (a) name of each bidder that submitted a bid; (b) bid prices as read out at bid opening; (c) names of bidders whose bids were rejected and the reasons for their rejection; and (d) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. The Executing Agency or Implementing Agency, as the case may be, shall respond in writing to unsuccessful bidders who seek explanations on the grounds on which their bids were not selected.
 - (xiv) A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that the Borrower shall reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question.
 - (xv) A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that ADB will declare a firm or individual ineligible, either indefinitely or for a stated period, to be awarded a contract financed by ADB, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices or any integrity violation in competing for, or in executing, ADB-financed contract.

4. Implementation of Consulting Services

46. Consulting services will be required for DD&TS and Institutional Development and Capacity Building (IDCB). Terms of Reference for consulting services are provided in Appendix 1.

47. The DD&TS consultancy services are to provide support to the executing agency/implementing agency(s), PMU and PUSOs (cumulatively "the Government") in safeguards monitoring, technical support and capacity building activities for responsible WWTP personnel during the project implementation and initial run-in period of constructed WWTPs. Expertise is required in the following fields: (i) environmental due diligence; (ii) social due diligence; (iii) Scada engineering; (iv) laboratory chemistry or microbiology, and (v) electrical engineering.

48. The DD&TS consultants will provide the following services: (i) support implementation of the environmental monitoring plans (EMPs) and ensure the grievance redress mechanism (GRM) functions are effective at all project sites, (ii) provide assistance in social due diligence and ensuring the social and gender action plan (SGAP) is executed according to project requirements, (iii) support in the establishment and checking of SCADA systems utilized in the WWTPs and monitoring during the commissioning stage, (iv) support in procurement and specification of laboratory equipment and establishment of laboratory and testing procedures, and (v) support in electrical engineering specifications and in ensuring contractors' compliance with electrical engineering requirements.

49. The consultants will also provide construction supervision services to the PMU and PUSO support units in each of the project *aimags*. They will (i) carry out daily supervision and quality assurance activities; (ii) assist in civil works contract quality control, (iii) assist in the phasing civil works, (iv) check contractor's running bills, (v) identify and propose solutions to mitigate or prevent impediments related to construction, (vi) support the commissioning of WWTPs, and (vii) monitor and conduct quality assurance of the operational procedure and WWTPs performance to ensure that they are in line with the Mongolian wastewater effluent standards and international best practices.

50. The development capacity and institutional support consultancy services are to provide institutional and organization development, capacity building support and training to the project *aimag* governments and respective PUSOs. Expertise will be required in the fields of (i) organizational development and utilities reform, (ii) water and wastewater sector financial management and reform, (iii) institutional strengthening and capacity building in wastewater management and operation, (iv) human resource and staff development, and (v) business and operational planning and business plan preparation.

51. Support and training will be provided in (i) wastewater management and operation, (ii) WWTP operation, (iii) utilities management, (iv) financial management, (v) environmental and social safeguards, (vi) institutional development, (vii) human resource development, and (viii) project monitoring and evaluation. The services will use materials already developed through the ongoing project and through other recent urban development initiatives and will support the mainstreaming of these improved approaches, procedures, and working practices into PUSO operations. Expertise is required in the following fields: (i) organizational development and utility reform, (ii) water and wastewater sector financial management, (iii) human resource development, (iv) capacity building in wastewater treatment plant operation and maintenance and business planning, and (v) other specializations as required. Tasks undertaken will include:

- (i) Analysis of the Current Situation: Assess and analyze the current situation with respect to the planning and delivery of water supply and wastewater services in project towns PUSOs;
- (ii) Strategic review of sector reforms at the national and local level;
- (iii) Organizational Restructuring: generate a preferred option for organizational restructuring and capacity development;
- (iv) Operational restructuring: Develop options for operational restructuring and capacity development;
- (v) Improved financial management systems: Develop proposals for improving financial sustainability and financial management;
- (vi) Regulation–tariff setting, billing, and income collection: Develop proposals for improved service regulation, tariff setting, billing and bill recovery;

- (vii) Emergency preparedness and response planning: Develop an emergency preparedness and response plan; and
- (viii) First stage reforms and capacity building: Support the first phase of institutional and organizational reform and carry out related capacity development.

C. Consultant's Terms of Reference

1. Package B.1 Due Diligence and Technical Support Consultants (Individual consultant selection)

52. **Objective.** Project DD&TS will be provided through individually hired consultants. The DD&TS consultants will assist the executing agency and implementing agencies, PMU, and PUSOs (cumulatively "the Government") in safeguards monitoring, technical support and capacity building activities for responsible WWTPs personnel during project implementation and initial run-in period of constructed WWTPs.

a. Output 1. Environmental safeguards compliance is monitored

53. **Scope of work.** The environmental consultant will support implementation of the environmental monitoring plans (EMPs) and ensure that the grievance redress mechanism (GRM) functions are effective at all project sites. Specific tasks include, but are not limited to:

- (i) Completing the Environmental Compliance Audit (ECA) Checklist for each existing WWTP and project site;
- (ii) Conducting desk review of an initial environmental examinations (IEE), EMPs, and detailed Environmental Impact Assessments (DEIAs) for each of the five sites and update them, if required;
- (iii) Assisting the PMU and PUSOs in establishing GRM in accordance with procedures defined in the IEEs or EMPs;
- (iv) Reviewing bidding and contract documents to ensure that all required environmental specifications are included and updated, as required;
- (v) Ensuring that EMPs and DEIAs are properly implemented in accordance with ADB's environmental policy guidance at five construction sites;
- (vi) Preparing annual EMP progress reports; and
- (vii) Conducting trainings for PUSOs and contractors on the requirements and implementation of the EMPs in accordance with the training plan defined in the project documents.

b. Output 2. Social safeguards implemented and monitored

54. The consultant will support the Government in the implementation of the SGAP in compliance with ADB social development policies and procedures and will coordinate an internal monitoring and other social safeguards related tasks.

c. Output 3. Technical support to construction and in initial operation

55. The team will provide advisory support and assistance in SCADA development, electrical engineering, and chemical engineering and or microbiology matters both during construction and during the initial operation of the plants (first 6 months). Specific tasks will include, but are not limited to:

- (i) Supporting the Government in the commissioning of WWTPs and quality

- assurance of civil works;
- (ii) Assisting in the preparation and implementation of treatment parameters, monitoring plans, standard operation procedures, performance monitoring programs, etc., specifically including those for sludge handling, treatment, and disposal; and
- (iii) Monitoring and conducting quality assurance of the operational procedure and WWTPs' performance during the first 6 months of operation and ensuring that they are in line with the Mongolian wastewater effluent standards and international best practices.

d. Output 4. Involuntary resettlement safeguards implemented and monitored

56. The consultant will provide guidance and support to the Government for the implementation of the Land Acquisition and Resettlement Plan (LARP) and coordinate to complete land acquisition and resettlement monitoring in compliance with the requirements set in the Safeguard Policy Statement (2009). The consultant will also provide the necessary orientation and training to concerned Government, PMU and PUSO staff on Safeguard Policy Statement (2009).

57. **Timing and duration.** The consulting service will be implemented from September 2018 to December 2021.³⁶

58. **Environmental safeguard specialist** (national, 12 person-months). The consultant will ideally have an environment-related postgraduate degree and 10 years of relevant experience in the field of environmental protection. The specialist will ideally have practical experience in implementing and monitoring environmental aspects of urban, water and wastewater projects. The expert will ideally have experience in managing the GRM. Specific tasks will include, but are not limited to:

- (i) Reviewing IEEs and project EMPs as well as DEIAs for five sites;
- (ii) Consulting with PMU and PUSOs to identify if there are any changes in the project baseline environmental conditions, to assess impacts and update the EMPs;
- (iii) Assisting the PMU in obtaining all necessary domestic environmental approvals to allow the projects to proceed, as required;
- (iv) Assisting the PMU and PUSOs in establishing GRM in accordance with GRM procedure defined in the IEEs or EMPs, coordinating consultation with local stakeholders as required, informing about imminent construction works, updating on the latest project development activities, etc., facilitating consultations between the contractor and local stakeholders with respect to construction scheduling, anticipated impacts, and proposed mitigation measures;
- (v) Reviewing tender and contract documents to ensure that all required environmental specifications are included, updating the documents as required;
- (vi) Assisting the PMU in ensuring the incorporation of relevant mitigation measures in the detailed designs, coordinated public consultations and disclosure and information dissemination with the social and resettlement team, and that the Government's environmental assessment requirements will not cause delay in the commencement of the construction phase;
- (vii) Assisting the PMU in preparing for procurement by: (a) ensuring that the Safeguard

³⁶ It includes a six-month period of operational support once the WWTPs have been commissioned.

- Policy Statement (2009)-compliant EMP is part of the tender documents and civil works contracts; and (b) establishing and incorporating environmental criteria, scoring, and weight in the evaluation of bids;
- (viii) Assisting the PMU in ensuring that contractors prepare their respective contractor's EMP (C-EMP) based on the ADB Safeguard Policy Statement (2009)-compliant EMP and actual site conditions and in evaluating the C-EMPs (C-EMPs);
 - (ix) preparing environmental supervision checklists for monthly supervision of the EMPs by the PUSO support unit, and reviewing contractor's EMPs to confirm compliance with the project EMP;
 - (x) conducting visits to work sites to provide guidance to, and advise the PIUs and operators on environmental management concerns arising during project construction and recommending corrective measures;
 - (xi) preparing annual EMP progress reports for ADB reviewing progress with project implementation and the results of internal monitoring, summarizing and responding to the verification report of the independent environmental monitoring consultant, identifying problems encountered, actions taken to resolve problems and activities planned for the next monitoring period;
 - (xii) conducting training for PUSOs, contractors, and local residents on the requirements and implementation of the EMP in accordance with the training plan defined in the Project documents;
 - (xiii) together with the PUSO support unit, organizing one public meeting in each project *aimag* prior to the project mid-term review to present and discuss EMP implementation progress, solicit community opinions and concerns, and agree on required corrective actions;
 - (xiv) carrying out regular environmental monitoring during the construction works;
 - (xv) carrying out laboratory tests on effluent, air and soil pollution and contamination, monitoring and taking corrective measures;
 - (xvi) preparing environmental protection and mitigation procedures in accordance with the audit recommendation and obtaining approval for implementation, if required;
 - (xvii) facilitating effective consultations with affected persons by the PMU in accordance with the EMP schedule;
 - (xviii) providing training and support on (a) EMP supervision, (b) monitoring, and (c) reporting to PUSOs, PMU and contractors;
 - (xix) upon completion of the project preparing a comprehensive environmental monitoring completion report in accordance with ADB's requirements and standards and submit this to the PMU for review;
 - (xx) preparing environmental sections of the project completion report, including a separate appendix on the project's environmental performance;
 - (xxi) monitoring and enforcing GRM provisions within the EMPs and supporting their implementation; and
 - (xxii) in close coordination with the PMU and the social safeguards national consultant overseeing compliance with the social and environmental covenants of the loan and project agreements, and the implementation of the EMPS and SGAP.

59. **Resettlement consultant** (national, 1 person-month). The resettlement consultant will assist in the updating of the agreed LARP, as required; implementation and monitoring of the LARP, monitoring of any unanticipated impacts, timely resolution of issues or complaints related to involuntary resettlement; and preparation of monitoring reports. The national resettlement consultant is tasked to provide the necessary orientation and training to concerned staff on Safeguard Policy Statement (2009).

60. **Social safeguard specialist** (national, 6 person-months). The expert will ideally have 10 years of relevant experience (including 5 years doing development projects) and sufficient knowledge of relevant regulations and procedures of Mongolia and ADB on social safeguards. Proficiency in English is required. The consultant will be responsible to provide social development support for project implementation, including implementation of the SGAP, and to coordinate the internal monitoring and other social safeguards related tasks. Specific tasks include, but are not limited to:

- (i) providing practical advice to the government on the implementation of the SGAP;
- (ii) ensuring that the SGAP is reviewed and is updated, as needed and that the SGAP is properly implemented and monitored;
- (iii) assisting executing agencies and implementing agencies in the development of plans for the establishment and implementation of the PPMS, conducting baseline, interim and final Project impact surveys; updating the annual PPMS in line with the implementation plan and completing the annual PPMS monitoring report in accordance with ADB policies and requirements, collecting sex-disaggregated data, where possible;
- (iv) Preparing and implementing an action plan for public awareness campaign identified in SGAPs;
- (v) Conducting visits to work sites to provide guidance to, and advise the PIUs and operators on social development and affected persons concerns arising during project construction and recommending corrective measures;
- (vi) In compliance with ADB guidelines, preparing quarterly project monitoring reports based on internal monitoring results; and
- (vii) Submitting the project monitoring report semiannually to Government and ADB.

61. **Chemist or microbiologist** (national, 4 person-months). The consultant will ideally have a relevant university degree and 7 years of work experience in the field of wastewater treatment technology and wastewater laboratory establishment or management. Practical experience in establishing wastewater laboratory and equipment maintenance is an advantage. The consultant's tasks shall include, but are not limited to:

- (i) assisting the Project Director and the PMU technical team to prepare bidding documents with regard to the technical requirements for the WWTP laboratory equipment;
- (ii) assisting in the evaluation of tenders relating to type, specifications, and quality of laboratory equipment being provided;
- (iii) preparing training documents and curricula specific to the WWTP's chemical and micro-biological aspects and standards;
- (iv) carrying out training to staff of PUSOs on the WWTP laboratory tests, use of laboratory equipment, labor safety in laboratory environment, and international standards on wastewater quality assurance;
- (v) preparing documents covering emergency actions plan and GRM sat the laboratory level; and
- (vi) liaising with the National Standardization and Metrology Agency in connection with effluent quality control and laboratory tests.

62. **SCADA specialist** (national, 4 person-months). The consultant will ideally have a university degree in automatics and 10 years of experience in the design and installation of SCADA systems, including in water supply and sewerage networks. The consultant's tasks include, but are not limited to:

- (i) assisting the WWTP equipment specialist in incorporating the SCADA software and hardware requirements in the technical specifications of the bidding document;
- (ii) Reviewing and confirming the SCADA operations manual prepared by the contractor and monitoring its implementation;
- (iii) Assisting to resolve SCADA-related issues during the commissioning of WWTPs;
- (iv) Monitoring SCADA system installation progress and reporting to the team leader and deputy team leader;
- (v) Monitoring SCADA operation at WWTPs, pumping stations, and other relevant facilities and participate in WWTPs' commissioning and in the early stages of the calibration;
- (vi) Verifying if the supplied SCADA equipment meets the requirements of the bidding document; and
- (vii) Contributing to the development of risk management plan and emergency preparedness and response plan in relation to SCADA operation.

63. **Electrical engineer** (national, 2 person-months). The consultant will ideally have an electrical engineering degree and 10 years of experience in the design and supervision of electrical works for water supply and wastewater systems. The consultant's tasks include, but are not limited to:

- (i) Assist the WWTP equipment/procurement specialists in preparing technical specifications for works and equipment with regard to electrical connections, transformers, and other equipment;
- (ii) Reviewing and confirming power supply and electrical equipment sections of operation manuals and other technical documentation prepared by the contractor;
- (iii) Supporting resident engineers in the supervision of electrical works during construction and installation of equipment;
- (iv) Verifying if the supplied electrical and power supply equipment and materials meet requirements of the contract document;
- (v) Providing training to staff of PUSOs on electrical and power supply aspects of the WWTP operation and maintenance;
- (vi) Supporting the team during the commissioning of WWTPs and early stages of calibration, if required; and
- (vii) Contributing to the development of risk management plan and emergency preparedness and response plan in relation to electrical and power supply works and equipment.

64. In addition to the specific tasks assigned above to each consultant, all consultants will perform the following common tasks to contribute to project management support:

- (i) Organize or assist in conducting workshops and community awareness campaigns in the field of their specialization, including dissemination of project information, and effectively collaborate with the government and other members of the team to achieve synergies, where applicable;
- (ii) Provide inputs for the inception, quarterly progress, annual, and final reports, as well as other technical reports, as required; and
- (iii) Document and share project work and accomplishment and maintain regular internal and external communication about project activities in their respective area of work.

65. **Reporting requirements and timing of deliverables.** The Consultants will submit the main deliverables listed in the table below.

Report or Output	Key Contents	Number of Copies and Language	Report Receiver	Weeks After Contract Signing
Inception Report	<ul style="list-style-type: none"> Input and activity plan Record of initial meeting held Mobilization arrangements Issues/constraints if any 	<ul style="list-style-type: none"> Three hard copies in Mongolian and one copy in English E-copies in English and Mongolian on CD 	Government and ADB	3 weeks
Progress Reports	<ul style="list-style-type: none"> Summary of work undertaken and progress against activity plan Main actions for next quarter Record of meetings held Issues/constraints if any 	<ul style="list-style-type: none"> Three hard copies in Mongolian and one copy in English E-copies in English and Mongolian on CD 	Government and ADB	Quarterly
Training activities	<ul style="list-style-type: none"> Preparation of training curriculum Report on training activities 	<ul style="list-style-type: none"> Three hard copies in Mongolian and one copy in English E-copies in English and Mongolian on CD 	Government and ADB	Quarterly
Project Completion Report	<ul style="list-style-type: none"> Summary of key project information and data Summary of issues and lessons learned Consultant final report Project Completion report 	<ul style="list-style-type: none"> Three hard copies in Mongolian and one copy in English E-copies in English and Mongolian on CD 	Government and ADB	4 weeks prior to the project completion

66. **Client's input and counterpart personnel.** Services, facilities and property to be made available to the Consultant by the Client:

67. The Client will provide the Consultant with office space in the PMU office and/or at each site of local PUSOs with internet access (personal computer not included).

68. **Counterpart contribution.** The MCUD will provide the detailed drawings of WWTPs.

69. **Training program.** The consultants will deliver capacity development and training activities during execution of the services. The key training programs to be conducted by the consultants are in the table below.

Table 4: Indicative Training Program

Training Program	Scope of Training	Trainer	Participants
Implementation of EMP and other ADB and Government of Mongolia's environmental	<ul style="list-style-type: none"> ADB environmental requirements EMP and environmental monitoring including execution requirements and responsibilities The importance of environmental, social and safety considerations in investment planning and execution 	Environmental Specialist	Government and PUSO Staff

Training Program	Scope of Training	Trainer	Participants
safeguards and social requirements	<ul style="list-style-type: none"> Government environmental and social policies, legislation regulations and requirements inspection and reporting, feedback and adjustment 		
Project Benefit Monitoring and Evaluation	<ul style="list-style-type: none"> PPMS Roles and responsibilities for implementation of PPMS Mechanisms for measurement of project outputs and outcomes Beneficiary surveys on public perceptions of infrastructure and service delivery 	Social Specialist	Government and PUSO Staff
Workshops on Key Project Issues	<ul style="list-style-type: none"> Workshops on project progress and execution and implementation issues (as needed) 	All specialists	Government and PUSO Staff
SGAP Training	<ul style="list-style-type: none"> Identify the necessary training for capacity building and prepare a training program to improve project outputs; and approve the program and budget by the relevant officials. Carry out the training workshops for executing agency, implementing agency and PUSOs staff on the following topics: <ul style="list-style-type: none"> (i) Implementing the SAP in accordance with ADB policy, procedures, and requirements (ii) Other trainings relevant to the implementation of the project (iii) Detailed instructions, information and guidelines on how to conduct the survey 	Social Specialist	Government and PUSO Staff

ADB = Asian Development Bank, EMP = environmental monitoring plan, PPMS = project performance monitoring system, SAP = social action plan, SGAP = social and gender action plan, PUSO = public utility service organization. Source: ADB.

Table 5: Inputs and Costs in US\$

Description	Person months	Per month	Total	Total
Package B.1: Technical Support and Safeguards				
Resettlement Specialist	1	3,000	3,000	3,000
Social Development Specialist	6	3,000	18,000	18,000
Environmental Safeguards Specialist	12	3,000	36,000	36,000
Chemist and/or Microbiologist	4	3,000	12,000	12,000
SCADA expert	4	3,000	12,000	12,000
Electrical	2	3,000	6,000	6,000
OPE				30,000
Total	29		87,000	117,000

2. Package B.2 Institutional Development and Capacity Building (Quality- and Cost-Based Selection)

70. **Objective.** The Organizational and Human Resource Development and Capacity Building Support will be provided through the consultant's team recruited under the consulting services assignment (package B2) of the project. The consultants will conduct trainings and assist water supply and sewerage provider companies: (i) Bulgan Meej for Bulgan *aimag*, (ii) Dundgovi-Uus for Dundgovi *aimag*, (iii) Khentii-Uus for Khentii *aimag*, (iv) Kuvsgul-ussuvag for Kuvsgul *aimag*, and (v) Durvuli for Sukhbaatar *aimag* in organizational reform and development, operational and financial management, financial management, accounting, and human resource development.

71. **Scope of work.** The consulting services will work closely with the *aimag* governments and project PUSOs to improve (i) planning for efficient water supply and wastewater management (WSWM) service, (ii) financial and technical sustainability, and (iii) service delivery and growth.

72. The consulting services will use materials, which were developed under the Grant projects³⁷ and other recent initiatives on institutional development of the urban service sector in Mongolia, and will support the mainstreaming of these improved approaches, procedures, and working practices into PUSO operations.

73. Execution and implementation of the contract will require 52 person-months of national consulting services. MCUD and PMU will be responsible for recruiting consultants through the quality-based selection procedure in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). Under the consulting services contract, all consultants shall act as key consultants and will bring required expertise to achieve the outputs below:

a. Output 1. Developed optimal options for organizational structural reform for PUSOs; strengthened PUSOs capacity

74. The consultant team will perform following tasks, but are not limited to:

- (i) Evaluating current performance indicators with respect to administrative, customer, finance, operations, maintenance, and planning of the PUSOs;
- (ii) studying the laws and regulations on improving public utility management and institutional development proposals and evaluating options within the framework of previous urban, water supply, and wastewater management technical assistance projects;
- (iii) developing organizational structure reform and supporting PUSOs in obtaining necessary approvals of such reform;
- (iv) managing arrangements regarding the operation and maintenance of new WWTPs of *aimags*;
- (v) developing key performance indicators for PUSOs; and
- (vi) developing an integrated 3 to 5-year organizational business plan.

b. Output 2. Proposals to improve the financial sustainability and financial management of the PUSO's developed, steps carried out to improve efficiency of capital investment

75. The consultant team will perform following tasks, but are not limited to:

- (i) Developing plan to revise financial management arrangements and improve financial management of PUSOs;
- (ii) developing and implementing plan to improve accounting, customer service, finance, procurement, and organizational structure;
- (iii) estimating appropriate operation and maintenance budgets over the next 3 to 5 years for each service type, and identifying potential sources to cover these costs;
- (iv) improving procedures for financial data collection and reporting; and
- (v) making recommendations to improve tariff setting procedure and working closely with the Water Service Regulatory Commission (WSRC).

³⁷ ADB, Urban Development Sector Project (Loan 2301-MON); ADB, Southeast Gobi Urban and Border Town Development Project (Grant 0204-MON); and UNDP, Rural Water and Sanitation Project MON-13/302.

c. Output 3. Improved Service Delivery and Customer Relations

76. The consultant team will perform following tasks, but are not limited to:
- (i) Assessing service quality and delivery from the customer's point of view,
 - (ii) developing plan to improve billing and income collection arrangements,
 - (iii) working with a Utility Financial Management Consultant to develop improved procedures for tariff setting, and
 - (iv) developing and implementing program to promote client orientation.

d. Output 4. Improved Human Resource Management

77. The consultant team will perform following tasks, but are not limited to:
- (i) Making recommendations for improving human resource policy and planning and to develop revised labor force plans,
 - (ii) identifying ways to improve work skills and efficiency of the labor force, and
 - (iii) identifying key organizational changes to support and achieve an improved business performance of organization.

e. Output 5. Improved infrastructure planning

78. The consultant team will perform following tasks, but are not limited to:
- (i) Studying infrastructure investment plans, urban master plans, and other relevant documents of project *aimags*;
 - (ii) reviewing water and sewerage infrastructure expansion plans of urban areas and ger districts and proposing phased solutions for implementation;
 - (iii) working with planning officers of *aimags* to develop proposals to integrate technical, environmental, economic, and social aspects of development planning and infrastructure planning for project *aimags*; and
 - (iv) developing infrastructure investment planning.

f. Output 6. Developed hydraulic modeling of water supply system for PUSOs

79. The consultant will perform following tasks, but are not limited to:
- (i) Developing water supply hydraulic modeling and preparing necessary data with local communities,
 - (ii) developing hydraulic modeling water supply network of *aimag* centers,
 - (iii) identifying the amount of water leakage in the networks,
 - (iv) establishing appropriate procedures for the most cost-effective system,
 - (v) determining the water supply network calculation by water consumption procedure, and
 - (vi) Identifying the safety requirements for installation and operation of networks.

80. **Timing and duration.** The estimated consultants' contract term is 24 months within the project implementation period.

81. **Team leader/organizational development specialist** (national, 12 person-months). The consultant will ideally have university degree (master's degree or equivalent) in business administration, economics, jurist water supply and wastewater; and 10 years of work experience in construction, urban services sector, institutional development, and management of human resources as well as in the design and development of government policies and programs that include planning, public administration, modernization and reform of urban services sector, including PUSOs. The consultant will ideally have extensive knowledge on international institutional structure and management of water and wastewater operators and advanced technologies used in water supply and sewerage systems and WWTPs.

82. Specific tasks include, but are not limited to the following:

- (i) Coordinating and supervising the overall performance of the team;
- (ii) assessing current performance indicators with respect to administrative, consumer, finance, operations, maintenance, and planning of the PUSOs—the water supply and wastewater utility service providers of the project;
- (iii) identifying constraints to improved service delivery and sustainability, their underlying causes (whether policy, organizational, financial and technical) and analyzing and proposing solutions for addressing these issues;
- (iv) preparing a functional profile for water supply and sewerage utility, including service arrangements and work flows, and developing options to improve operational services;
- (v) looking at government decrees and regulations relevant to public utility management, institutional development proposals, options developed by earlier urban, water supply, and wastewater management loan, grant and technical assistance projects in Mongolia, and developing optimal versions for structural reform of the *aimag* PUSOs;
- (vi) introducing suitable management arrangements for new wastewater treatment plants;
- (vii) developing key performance indicators for the PUSOs);
- (viii) developing an integrated 3 to 5-year business plan setting performance progress benchmarks towards defined standards of service, resourcing needs in terms of operating budget, capital investment, manpower, and pricing implications to meet financial targets;
- (ix) incorporating best practices of international water supply and sewerage management in the PUSOs' business plans;
- (x) preparing training programs and materials and provide classroom and on-the-job training for *aimag* governments, PUSO staff, and other stakeholders and organize a study tour; and
- (xi) supporting the first phase of reform.

83. **Utility financial management** (national consultant, 8 person-months). The consultant will ideally have an advanced university degree (master's or equivalent) in accounting and a certified specialized accountant. Experience working at the finance department of water supply and sewerage service provider organizations will be an advantage. The consultant will play a major role in planning and implementing all the financial management aspects including accounting and budgeting, tariff setting mechanisms, capital investment planning, and billing and collection system. The consultant will prepare and support the implementation of financial management inputs to the institutional improvement action plan. Specific tasks include, but are not limited to the following:

- (i) Assessing the current financial performance indicators of the PUSOs;
- (ii) assessing the accounting, budgeting, business plan, and tariff setting policies and procedures;
- (iii) developing and assisting in the implementation of an institutional development plan for accounting, customer services, finance, and purchasing;
- (iv) estimating appropriate annual operation and maintenance budgets based on realistic and affordable requirements over the next 5 and 10 years for each service type, and identifying potential revenue sources to cover these costs;
- (v) providing advice and assisting in improving procedures for financial data collection and reporting;
- (vi) developing a financial management improvement plan to modernize the financial management arrangements of PUSOs including (a) current and capital budget reporting and controls, (b) improved cost controls, (c) use of job costing and activity-based costing as appropriate, (d) developing relevant financial performance indicators and ratios, (e) control of working capital and cash flow, (f) using financial planning and financial input to business plans, (g) computerization of systems as appropriate, (h) financial training for financial staff and non-financial managers; and (i) improvements in financial procedures and regulations;
- (vii) working with the WSRC and the utility service delivery and customer relations consultant to conduct trainings on tariff setting of water supply, wastewater and service fees;
- (viii) providing recommendations to improve tariff setting procedure;
- (ix) providing advice on mechanisms to assure pro-poor tariff structures and/or subsidies;
- (x) preparing training programs (classroom and on-the-job training) and materials for accountants at different levels, financial managers, and non-financial managers;
- (xi) supporting capacity building activities and making contributions towards their organization as required; and
- (xii) contributing to the development of the PUSO institutional reform proposal and supporting the first phase of reform.

84. **Utility service delivery and customer relations** (national, 10 person-months). The consultant will be a certified engineer specializing in water supply and sewerage system and 10 years of work experience in PUSO operation, maintenance, tariffs, and stakeholder management including central and local government agencies, business, and domestic customers. Specific tasks include, but are not limited to the following:

- (i) Assessing service quality and delivery from the viewpoint of the utility and of customers;
- (ii) reviewing procedures for recording data needed for tariff calculations including all aspects of the water supply and wastewater systems, customer service, and utility administration;
- (iii) organizing customer surveys and focus group discussions;
- (iv) developing and implementing programs to promote client orientation;
- (v) developing appropriate customer response and effective feedback strategies;
- (vi) in cooperation with the Utility Financial Management Consultant and in consultation with the WSRC, developing improved procedures for the periodic review of tariffs including (a) compliance with pricing regulations, (b) customer affordability analysis, (c) cost recovery to improve service delivery and company performance, (d) financial independence, (e) review and justification of any cross-subsidization in pricing, (f) collecting and analyzing results from customer

- satisfaction and willingness to pay surveys and other public consultations, and (g) setting a defined timetable for price reviews;
- (vii) reviewing billing tariff and income collection arrangements and efficiency, and developing plan to improve effectiveness, including (a) user registration; (b) extent of computerization and scope for systems enhancement, (c) extent of arrears and mechanisms to reduce arrears and improve promptness of bill payment, (d) management information to aid debt recovery, e) methods of billing, payment, and payment processing, (f) bill layout and explanations given to customers, (g) benefits and costs of a progressive introduction of “smart metering,” and (h) need for staff training;
 - (viii) carrying out a brief market survey to determine interest in the domestic private sector for entering into private-public partnership in urban water supply and wastewater management sector in the project *aimags*;
 - (ix) improving and undertaking a general review of the PUSOs’ routine and periodic maintenance programs and planning and providing feedback to and working with the Project Management and Implementation Support consultant team in developing emergency preparedness and response plans;
 - (x) developing and implementing public awareness and education programs including protection of water resources from pollution, water conservation, and water reuse;
 - (xi) preparing training materials and provide classroom training and on-the-job training to *aimag* and PUSO staff;
 - (xii) supporting capacity building activities and making contributions towards their organization as required; and
 - (xiii) contributing to the development of PUSO institutional reform proposal and supporting the first phase of reform.

85. **Human resource development** (national, 8 person-months). The consultant will ideally have a university degree (master’s degree or equivalent) in corporate governance and human resource as well as 10 years of experience in urban infrastructure and service provider organizations including business planning, human resource management, evaluation, and developing training programs. Specific tasks include, but are not limited to the following:

- (i) Preparing institutional and organization development planning procedures;
- (ii) assisting PUSOs in developing organizational development plans;
- (iii) providing advice and conducting training on business planning, human resources management, and performance monitoring;
- (iv) developing human resources policies and procedures to improve workforce skills and performance including staff appraisal and performance measurement systems, identification of training needs and delivery of training, and reward mechanisms and incentive structures;
- (v) making recommendations for improvements in human resource planning and assisting in the preparation of revised staffing plans, particularly on the requirements to operate new WWTP;
- (vi) providing support in achieving targets and identifying key organizational changes;
- (vii) providing advice on corporate governance, including effective internal controls, rationalization of the existing Board of Directors and providing assistance to staffing;
- (viii) assisting in the implementation of an institutional development program for administration, engineering, operations, and maintenance;
- (ix) designing and developing a management information system to allow company management to monitor real-time performance against business plans; and

- (x) contributing to the development of the PUSO institutional reform proposal and supporting the first phase of reform.

86. **Infrastructure planning specialist** (national, 6 person-months). The consultant will ideally be a certified engineer specializing in urban planning, water supply/sewerage, and construction engineering; and have 10 years of experience and extensive knowledge in aligning infrastructure planning with urban master plans, institutional structure and management of water and wastewater operators and advanced technologies used in water supply and sewerage systems and WWTPs. The consultant will work with stakeholders to support integration of initiatives and support institutional capacity development for planning and expansion of services. Specific tasks include, but are not limited to the following:

- (i) Studying water supply and wastewater sector infrastructure investment plans, urban master plans, and other relevant documents of project *aimags*;
- (ii) reviewing previous and current urban and regional economic, land use, and transportation plans for project *aimags* and discussing and proposing optimization from an integrated infrastructure efficiency perspective;
- (iii) reviewing the extension plan for water supply and wastewater infrastructure in *aimag* centers and *ger* districts and recommend solutions for implementation;
- (iv) developing a draft performance contract between PUSOs and the *aimag* governments to allow strategic “arms-length” supervision and include mechanisms for the cost of extending infrastructure and services into new development areas, that should be factored into land use and development approvals;
- (v) working with planning officers of *aimags* in integrating various technical, environmental, economic and social aspects of development planning and infrastructure planning for project *aimags*, and organizing workshops;
- (vi) assisting PUSOs in identifying and prioritizing investment projects and linking this process to the preparation of business plans and capital budgets;
- (vii) working with the team leader to develop action plans to improve public utilities and assisting and supporting with the implementation;
- (viii) preparing training programs and materials and providing classroom and on-the-job training to *aimag* governments and PUSO staff; and
- (ix) contributing to the development of the PUSO institutional reform proposal and supporting the first phase of reform.

87. **Hydraulic modeling** (national, 8 person-months). The consultant will be an engineer specializing in water supply and sewerage and has 5 years of experience in the analysis and development of hydraulic modeling of urban water supply transmission and distribution networks. The consultant will develop a hydraulic modeling of water supply networks in *aimag* centers, including looking at the water consumption of industrial and residential zones and other consumers, using the internet-based EPANET or Water CAD software applications. Network maps with designs will be prepared on AutoCAD software for each *aimag*. Specific tasks include, but are not limited to the following:

- (i) Ensuring PUSOs provide data to be used in the calculation, including elevation of water supply networks, pipe diameters, aging, materials, wells, fire hydrants, valve, transfers and connection etc., and ensuring the information is available in the application;
- (ii) aligning the hydraulic calculation of water supply network, transmission, distribution pipeline of the city, and other related calculations with the city general

- plan, and estimating pressure values of the network, details and the design of the distribution network to develop the hydraulic modeling;
- (iii) carrying out balancing of each hydraulic network system, estimations at water use peak hours, fire protection layout, and maximum consumption;
 - (iv) identifying the amount of water leakage in the network and determining the optimal model for the most cost-efficient operation mode;
 - (v) determining the calculations of the water supply network with regard to the number of buildings, population density, types of water supply sources, networks, water reservoirs, pump stations, geographical location and classification and quantification of customers, capacity and mode of water consumption;
 - (vi) preparing technical specifications for computers and printing devices to be procured³⁸ for and used by PUSOs in hydraulic modeling;
 - (vii) defining the safety requirements of network installation and operation;
 - (viii) training associated engineers and technical staff of PUSOs with the aim of having at least 2 staff in each PUSO working on modeling independently; and
 - (ix) contributing to the development of the PUSO institutional reform proposal and supporting the first phase of reform.

88. **Training program.** Capacity development and training program will be arranged and carried out by the consultants as an integral part of the implementation of the IDCB services. The program is intended to support institutional development and management improvements. The table below provides an indication of the training and study tours required.

Table 6: Training Program

Training Program	Scope of training	Facilitator	Participants
1. Water supply and wastewater management and operation	<ul style="list-style-type: none"> • International best practices on utility service objectives and institutional structure • Coordination and strategic planning • Role of <i>Aimag</i> Governments, service providers, users, and private sector • Projections on demand in urban development and services • Level of service and affordability • Service delivery patterns and innovation • Elements of the plan and implementation sequence • Rehabilitation of networks facilities • Initiatives on connecting <i>ger</i> areas to centralized piping systems and reduction of user connection costs 	Consultant team	PMU, MCUD, <i>Aimag</i> Governments, and PUSOs
2. WWTP operation	<ul style="list-style-type: none"> • Wastewater treatment technology options and selection • Wastewater management, equipment operation, and maintenance • Effluent water reuse • Sludge processing and management • Monitoring of effluent discharging process and PUSO role in it 	Consultant team	PMU, MCUD, <i>Aimag</i> Governments, and PUSOs
3. Operation and management of the facility	<ul style="list-style-type: none"> • Operational requirements of systems and facilities including financial and economic case for asset protection 	Consultant team	PMU, PIUs, MCUD, <i>Aimag</i>

³⁸ Computers and printing devices will be procured locally by a consultant team in accordance with ADB's Procurement Guidelines. Shopping method shall be applied.

Training Program	Scope of training	Facilitator	Participants
	<ul style="list-style-type: none"> • Definition of preventive, routine, and periodic maintenance • Lifetime pricing and assessment of economic lifetime of assets • Facilities management • Maintenance planning and resource allocation • Emergency planning and response 		Governments, and PUSOs
4. Financial management	<ul style="list-style-type: none"> • Financial management and affordability, cost recovery, tariff regimes, and options • Revenue enhancement, debt management, and expenditure control • Financing options for capital improvements • PUSO's financial management with regard to profit oriented investment • Water leakage impact on income 	Consultant team	PMU, MCUD, <i>Aimag</i> Governments, and PUSOs
5. Customer relations	<ul style="list-style-type: none"> • Customer survey • Procedure for periodic review of tariffs • Billing tariffs and income collection arrangements 	Consultant team	PMU, MCUD, <i>Aimag</i> Governments, and PUSOs
6. Institutional development	<ul style="list-style-type: none"> • Purpose and structure of the business plan • Challenges in restructuring management including corporate governance and management structure, financial and human resource matters • Adopting a customer-oriented approach • Role of the private sector including public service contracts, benefits and risks • Workshops on institutional development and reform process issues • Establishing tariffs for water supply and sewerage operation and services • Preparing consolidated infrastructure planning • Organize study tours to understand approaches to efficient water supply and sewerage system service delivery in small cities of East Asia • Study good practices in managing water supply and sewerage utilities in similar socio-economic and geographical environments, e.g., countries applying technologies suitable for cold climate regions like Eastern and Northern Europe, North America (Alaska) 	Consultant team, WSRC	PMU, MCUD, <i>Aimag</i> Governments, and PUSOs
7. Human resource development	<ul style="list-style-type: none"> • Business planning, including human resource management and performance monitoring training • Improve capability and effectiveness of staff, human resource development policies and practices 	Consultant team	PMU, MCUD, <i>Aimag</i> Governments, and PUSOs
8. Hydraulic modeling of water supply pipeline networks	<ul style="list-style-type: none"> • Conduct phased training for developing the hydraulic modeling of water supply 	Consultant team	PMU, MCUD, <i>Aimag</i> Governments, and PUSOs

MCUD = Ministry of Construction and Urban Development Unit, PMU = Project Management Unit, PUSO = Public Utility Service Organization, WSRC = Water Services Regulatory Commission, WTPP = wastewater treatment plant.

Note: Consultant team refers to the consultant team in the contract package Institutional Development and Capacity Building.

89. Reporting requirement and timings of deliverables. The consultants will submit to the executing agency the main deliverables indicated in the table below but are not limited to the following:

Report or Output	Key Contents	Number of Copies and Language	Report Receiver	Terms After Agreement Signing
Inception Report	<ul style="list-style-type: none"> • Consultant's input and activity plan • Record of initial meeting held • Mobilization arrangements • Issues/constraints, if any 	<ul style="list-style-type: none"> • seven hard copies in Mongolian and one copy in English • E-copies in English and Mongolian on CD 	MCUD, PMU, PUSOs of five project cities and ADB	A month after contract signing
Progress Report	<ul style="list-style-type: none"> • Summary of work undertaken and progress against activity plan • Main actions for next quarter • Record of meetings held • Challenges 	<ul style="list-style-type: none"> • seven hard copies in Mongolian and one copy in English • E- copies in English and Mongolian on CD 	MCUD, PMU, PUSOs of five project cities and ADB	Quarterly reports
Training Report	<ul style="list-style-type: none"> • Trainings held including (i) training programs and interpretation and detailed methodology, (ii) participants' registration and photo documentation during training, and (iii) reports on learning outcomes and results achieved for the participants 	<ul style="list-style-type: none"> • seven hard copies in Mongolian and one copy in English • E- Copies in English and Mongolian on CD 	MCUD, PMU, PUSOs of five project cities and ADB	Consolidated quarterly reports
Final or Completion Report	<ul style="list-style-type: none"> • Consolidated project data • Challenges and solutions to problems and lessons learned • 	<ul style="list-style-type: none"> • seven hard copies in Mongolian and one copy in English • E- Copies in English and Mongolian on CD 	MCUD, PMU, PUSOs of five project cities and ADB	One month before the end of contract
Report prepared for executing agency as required	<ul style="list-style-type: none"> • Other reports required by the executing agency during the implementation of the consultant contract 	<ul style="list-style-type: none"> • seven hard copies in Mongolian and one copy in English • E- Copies in English and Mongolian on CD 	MCUD, PMU, PUSOs of five project cities and ADB	As required

ADB = Asian Development Bank, MCUD = Ministry of Construction and Urban Development Unit, PMU = Project Management Unit

90. **Client's input and counterpart personnel.** Services, facilities, and property to be made available to the Consultant by the Client:

91. Client shall provide the Consultant with office space (including chairs and tables) with internet access necessary for regular office operations (computer not included).

92. The Client shall facilitate access to the following official documents:

- (i) Reports under previous projects including the:
 - (a) Public Utility Reform Handbook prepared under Loan 2301-MON: Urban Development Sector Project (ADB, 2015);
 - (b) Consultant's report on the contract package A4: "Establishment of a Long-term Concession Agreement to Carry out Public Utility Service and Establishment of an Independent Sector Regulator" prepared under Grant 0204-MON Southeast Gobi Border Town Development Project, (ADB, 2015); and

- (c) Rural Water and Sanitation Project Final report prepared under MON 13/302 (UNDP) April 2014;
- (ii) local water supply and sewerage network layout drawings in AutoCAD format prepared by relevant local authorities; and
- (iii) basemap prepared and officially approved by the Department of Land Affairs of each *aimag*.

93. **Equipment.** The consultant shall supply the computers equipped with a printing device necessary for the hydraulics estimations of the water supply system for the five project sites. The consultant shall prepare the technical specifications of five computer sets and shall carry out the procurement upon approval of the Client using the shopping method in accordance with ADB's guidelines. The computer systems will be handed over to each respective local PUSOs after set up.

94. **Transportation.** The consultant team shall use a car for local travels to the project sites. The budget for this provision is reflected in the reimbursable cost category of the contract budget. The budget sum for the transportation includes purchase of a car, insurance, repair and maintenance, and other relevant costs. The consultant shall undertake the procurement in accordance with ADB's procurement guidelines under supervision of the Client and bears the responsibility of normal operation of the vehicle for the entire term of the contract. All five project *aimag* centers are connected to Ulaanbaatar (main consultant's office location) via proper asphalt pavement road in good condition and therefore no 4-wheel drive car is required. After expiry of the contract term the Consultant shall hand over the possession of the vehicle to the Client.

Table 7: Inputs and Costs in US\$

Description	Person Months	Per month	Total	Total
Package B.2: Institutional Reform, Organizational and Human Resource Development (OHRD) and Capacity Building				
Task Leader OD and Utility Reform Specialist	12	4,000	48,000	48,000
Water Sector Financial Management Specialist	8	3,000	24,000	24,000
Social Development and Community Relations Specialist	10	3,000	30,000	30,000
Human Resource Development Specialists	8	3,000	24,000	24,000
Infrastructure Planning Specialist	6	3,000	18,000	18,000
Hydraulic Modelling Specialist	8	3,000	24,000	24,000
OPE				50,000
Total	52		168,000	218,000

3. Package B.3 Construction Supervision Consultants (Individual consultant selection)

95. **Objective.** Contract supervision engineers will be provided through individually hired consultants. The Contract supervision engineers will assist the EA/IAs, PMU, and PUSO project support units (cumulatively "the Government") in supervising project construction and assisting with progress measurement and reporting, measurement and verification of works, etc.

a. Output 1. Technical review, construction supervision, plant commissioning, and support to initial operation

96. **Scope of work.** The team will carry out the technical review and quality assurance of construction works, support the Government in monitoring and commissioning of WWTPs, and

provide advisory support and assistance during the commissioning of the plants (first 6 months). Specific tasks will include, but not limited to:

- (i) Carrying out daily supervision and quality assurance activities of civil works and equipment installation;
- (ii) assisting the PMU and PUSO support units in civil works contract management in terms of cost, time, and quality control;
- (iii) assisting the PUSOs and WWTP contractors in phasing civil works to ensure continuity of the existing WWTPs' operation during construction and commissioning;
- (iv) identifying and proposing solutions to mitigate or prevent impediments related to construction, equipment installation, quality of works, and other issues as they arise;
- (v) supporting the government in the commissioning of WWTPs and quality assurance of civil works;
- (vi) assisting in the preparation and implementation of treatment parameters, monitoring plans, standard operation procedures, performance monitoring programs, etc., specifically including those for sludge handling, treatment and disposal; and
- (vii) monitoring and conducting quality assurance of the operational procedure and WWTPs' performance during the first 6 months of the plants' operation and ensure that they are in line with the Mongolian wastewater effluent standards and international best practices.

97. **Timing and duration.** The consulting service will be implemented from October 2018 to October 2021.

98. **Construction supervision resident engineers** (National, five positions per *aimag*, 18 person-months each). The role will support the PMU and PUSO support units in managing and supervising civil works and equipment installation. In order to maintain continuous and daily supervision of construction works, engagement of a resident engineer residing permanently in the respective project *aimag* center is advisable. The specialist will ideally have a degree in civil engineering and 10 years of relevant work experience. The engineer will ideally have experience in supervising civil works including mass in-situ concrete structures and in installing and commissioning of equipment. Good understanding of English is an advantage. Specific tasks will include, but not limited to:

- (i) Carrying out daily supervision and quality assurance for all civil works and equipment installation;
- (ii) working closely with and assisting the PMU and PUSO support units in all activities relating to contract management and supervision;
- (iii) assisting the PUSOs and WWTPs contractors in phasing civil works to ensure continuous wastewater treatment during construction;
- (iv) together with other project team members, identifying and proposing solutions to mitigate and prevent impediments related to construction, equipment installation, quality of works, and other issues as they arise;
- (v) coordinating and facilitating stakeholder and community consultations on environmental and social safeguards, and contributing to project information dissemination;
- (vi) under the project manager's supervision, administering civil works contracts, including the review of the contractor's progress payment certificates, contract

- extension proposals, and preparing the EA draft change orders, non-conformance notices, and proposals for application of liquidated damages, as required;
- (vii) supporting the preparation of withdrawal applications by the PMU and provide information and supporting documents, as needed;
 - (viii) working with the PMU and PUSO units in obtaining licenses, permits for construction, rights of access to land and other compulsory administrative steps as needed in line with the relevant regulations in Mongolia and in agreement with ADB procedures;
 - (ix) contributing to the PMU's preparation of the Project's annual and monthly implementation schedules, and updates thereto;
 - (x) supporting environmental and social safeguards consultants in overseeing compliance with the Project's social and environmental covenants, and the implementation of the EMPs and SGAP;
 - (xi) in close collaboration with the PMU and PUSO units, reviewing training schedules and training documents proposed by the contractors and participate actively in the delivery of training programs;
 - (xii) reviewing operation and maintenance manuals prepared by contractors;
 - (xiii) supporting the government in WWTP commissioning; and
 - (xiv) monitoring and ensuring the quality of operational procedures and plant performance during the first 6 months of plant operation and their compliance with the Mongolian effluent standards.

99. In addition to the specific tasks assigned above to each consultant, all consultants will perform the following common tasks to contribute to project management support:

- (i) Disseminate project information and effectively collaborate with the government and other team members to achieve synergies, where applicable;
- (ii) provide inputs for the inception, quarterly progress, annual and final reports, as well as other technical reports, as required; and
- (iii) document and share project work and accomplishment and maintain regular internal and external communication about project activities in the areas of responsibility.

100. **Reporting requirements and timing of deliverables.** The Consultants will submit main deliverables listed in the table below.

Report or Output	Key Contents	Number of copies and language	Report Receiver	Weeks after the contract signing
Progress Reports	<ul style="list-style-type: none"> • Summary of work undertaken and progress against activity plan • Main actions for next quarter • Record of meetings held • Issues/constraints, if any 	<ul style="list-style-type: none"> • Three hard copies in Mongolian and one copy in English • E-copies in English and Mongolian on CD 	Government and ADB	Quarterly
Project Completion Report	<ul style="list-style-type: none"> • Summary of key project information and data • Summary of issues and lessons learned • Project Completion Report 	<ul style="list-style-type: none"> • Three hard copies in Mongolian and one copy in English • E-copies in English and Mongolian on CD 	Government and ADB	4 weeks prior to project completion

101. **Client's inputs and counterpart personnel.** Services, facilities and property to be made available to the Consultant by the Client:

102. The Client will provide the Consultant with office space at each site of local PUSOs with internet access (personal computer not included).

103. **Counterpart contribution.** The MCUD will provide the detailed drawings of WWTPs.

104. **Training program.** The consultants will deliver capacity development and training activities during execution of the services. Key training programs to be conducted by the consultants are outlined in the table below.

Table 8: Inputs and Costs in US\$

Description	Person Months	Per month	Total	Total
B.3. Construction Supervision Consultants				
Resident Engineers	90	1,500	135,000	135,000
Total	90		135,000	135,000

Table 9: Indicative Training Program

Training Program	Scope of Training	Trainer	Participants
Construction Management	<ul style="list-style-type: none"> Construction management including roles of client's representative, resident engineer, other engineers etc., and quality control Quality assurance and third party verification Training for government and PUSO staff on the following topics: construction management, WWTP technology including IFFAS technology, WWTP operation and maintenance 	Supervision engineer	<i>Aimag</i> Government and PUSO Staff
Workshops on Key Project Issues	<ul style="list-style-type: none"> Workshops on project progress and execution and implementation issues (as needed) 	Supervision engineer	<i>Aimag</i> Government and PUSO Staff

IFAS = integrated fixed-film activated sludge, PUSO = public utility service organization, WWTP = wastewater treatment plant.

Source: Asian Development Bank.

VII. SAFEGUARDS

A. Environment Safeguards

105. **Review of environmental performance of current project.** The original project is in compliance with ADB's eligibility criteria for additional financing.³⁹ The original project was classified as category B for environment. Initial environmental examinations (IEEs) for those components classified as category B have been carried out and disclosed on the project website in 2010. The original project's compliance with the approved IEEs is satisfactory. This was confirmed by an external environment monitor (EEM) that was engaged to conduct independent EMP compliance monitoring and verification from September to December 2014. Environmental monitoring reports were submitted to ADB and disclosed on the project website (latest report

³⁹ ADB. 2011. *Additional Financing. Operations Manual. OM H5/BP*. Manila.

submitted in December 2016). A project management unit (PMU) was established within the executing agency (MCUD) in December 2010 and is fully staffed and functional. PIUs were established in each of the participating *aimags* in June/July 2011. A national environmental specialist (8 person-months) was recruited in June 2011 to support the PMU and PIUs in coordinating and supervising the implementation of EMPs. The consultant (i) prepared the annual detailed environmental evaluation (DEE) for Mongolian environmental authorities; (ii) assisted the preparation of bidding documents for the detailed EIAs, and (iii) reviewed the detailed EIAs of six projects. Furthermore, the specialist worked on the updating of these detailed EIAs and EMPs for every subproject during the engineering detailed design stage and verified that environmental issues were incorporated in the project design. Consulting services under the first additional financing project include the services of a social safeguards specialist.

106. Environment safeguards due diligence of the second additional financing project.

The current project, and the second additional financing project are classified as category B for environment by ADB. For the second additional financing project components, an IEE and an EMP were prepared by the TA consultant on behalf of MCUD. Domestically, the additional financing project components were subject to general environmental impact assessment (GEIAs) by the Ministry of Nature, Environment, and Tourism (MNET). The GEIA conclusions have required the preparation of five detailed EIAs (DEIAs) for each *aimag* center. The detailed environmental impact assessments (DEIA) were prepared by two licensed EIA institutes (Undurkhaan Trade LLC and Environ LLC), and have all been approved before the end of March 2018. Key parts of the DEIAs (including environment baseline, public consultation, and environment mitigation measures) have been incorporated into the IEE and the EMP. The EMP is in Attachment 1 of the IEE.

107. Anticipated environmental benefits and impacts. The additional financing project will have substantial environmental and socioeconomic benefits. The cumulative wastewater treatment capacity of 15,000 m³/day will remove significant amounts of pollutants, including biological oxygen demand (1,050 tons per year, 2030 projections), ammonia nitrogen (120 tons per year), and phosphorous (31 tons per year). Findings of the IEE and the DEIAs show that the project does not have any predicted significant, long term or irreversible environmental impacts. Short-term impacts are anticipated during construction including dust, noise, and waste generated during earthwork and civil works activities, as well as minor community and occupational health and safety risks. These can be mitigated to an acceptable level through mitigation measures defined in the EMP, which relate primarily to implementing good construction practice as well as meeting the particular needs of the project areas through consultation with affected persons.

108. During operation, no significant adverse environmental impact is anticipated. Comprehensive training of PUSO staff (under Output B) and appropriate technological design will contribute significantly to reducing operational risks of the sub-components. Prior to commissioning of the WWTPs, a series of tests will be conducted to ensure proper functioning of the WWTPs and their ability to meet Mongolian discharge standards. A wastewater quality monitoring system for key parameters ([BOD, total phosphorus, ammonium will be introduced at each WWTP. Daily check, repair and maintenance procedures will be instituted for all wastewater treatment facilities and equipment. WWTP sludge will be dewatered through filter press and disposed of onsite in sludge drying beds. Options for beneficial sludge reuse will be investigated during project implementation.⁴⁰ Effluent polishing will be carried out in oxidation (waste stabilization) ponds providing both additional treatment and storage in case of reuse. The ponds also serve as an emergency retention and treatment system in the event of plant malfunction. No

⁴⁰ Additional grant funding will be sought to support this activity.

WWTP effluent will be discharged to nearby surface water bodies (Kherelen river in Chinggis City, Delgermurun river in Murun, and an unnamed river in Bulgan City). Emergency preparedness and response plans will be formulated and put in place before the WWTPs become operational.

109. Environmental management plan implementation responsibilities. The EMP specifies the roles and responsibilities of key project stakeholders (including MCUD, the PMU, the PUSOs, Ministry of Environment, Green Development and Tourism, the State Professional Inspection Agency, contractors, and PMIS) in overall environmental management.

- (i) MCUD as executing agency has the overall responsibility for compliance with safeguards plans. The existing project management unit (PMU) established for the Grant 0204 project under MCUD will manage the additional financing components, including but not limited to (a) coordinating the tendering process including overseeing the incorporation of EMP clauses into the bidding documents, (b) ensuring the procurement of environmentally responsible contractors, (c) ensuring that DEIA approvals by MEGDT have been secured prior to the awarding of civil works contracts, (d) supervising project construction (with support of PMIS resident engineers), and (e) reporting to ADB.
- (ii) The PMU will procure the services of additional project management and implementation support (PMIS) consultants including one international and one national environment consultant (LIEC) under Output B to provide support in (a) the training on EMP supervision to PUSOs and contractors; (b) setting up environmental management and internal monitoring systems at PUSO and civil works contracts level; (c) reviewing tender and contractor documents to ensure all required environmental specifications have been included and updated as required; (d) preparing environmental supervision checklists for monthly supervision of the EMP by the PUSO Support Group, and review contractor-EMPs to confirm compliance with the project EMP; (e) establishing GRMs and providing training; (f) regular EMP and environmental quality monitoring in compliance with the monitoring plan; (g) coordinate public consultation prior to and during construction, and at project completion stage; (h) preparing annual EMP progress reports to ADB; and (i) identifying environment-related implementation issues and necessary corrective actions.
- (iii) Each PUSO will establish a PUSO Support Group to handle the day-to-day activities under the AF project. Under the guidance of the PMIS (resident engineers and the LIEC), the PUSO Support Groups will be responsible for the local supervision of EMP implementation, including (a) setting up and coordinating the local grievance redress mechanism; and (b) monitoring contractors to ensure adherence to the project EMP and the contractor EMPs; (iii) preparing quarterly reports on project EMP implementation to the PMU; and (iv) coordinating consultation with local stakeholders as required, informing them of imminent construction works, updating them on the latest project development activities, GRM, etc.; as defined in the monitoring program.
- (iv) Civil works contractors will be required to formulate contractor EMPs (or site EMPs) with complete management systems for adverse impacts, e.g., dust control, noise control, access control and temporary traffic management, addressing as a minimum the requirements of the EMP and the relevant DEIA. The contractor EMPs will be renewed on a yearly basis, submitted to the PUSO Support Group for review, and to *aimag* environment protection authorities for approval. The bid documents for civil works contracts and contract documents shall include (a) the updated IEE, EMP, and relevant DEIA as attachments; (b) provision requiring them

to operationalize the EMP before implementation by developing detailed management plans or site-specific management plans, as necessary; (c) appropriate clauses to ensure EMPs are implemented during construction; (d) environmental conditions to be met for preliminary or final acceptance, during which the contractor's responsibility is partially/fully released, such measures that contractors shall properly dispose the surplus construction materials and solid wastes and conduct general site clean-up including of construction camps, rehabilitate borrow pits and quarry sites, as applicable; (e) penalties to be incurred by contractors for major default in the implementation of EMP; (f) information on their track record; and (g) appropriate provisions that their environmental performance will be evaluated.

- (v) The PMU will also procure the services of an independent environment monitor (IEM). The IEM will conduct independent EMP implementation verification and environmental quality monitoring during project construction. The IEM will (a) conduct site visits to each construction site (five *aimags*) during the construction period to assess the project's compliance with the project EMP and the domestic EIAs; (b) conduct environmental quality monitoring covering air quality, noise, and construction wastewater quality at each construction site in compliance with the monitoring plan; (c) assess the contractors, PUSOs, PMIS, and PMU's compliance with their respective EMP implementation responsibilities as defined in the PAM; and (d) prepare independent EMP monitoring reports for the PMU. The reports should highlight good practices, identify problems encountered, and define recommendations for actions to be taken to resolve problems or improve environment management performance of various stakeholders.

110. **Environmental grievance redress mechanism.** Environment safeguards related complaints or disputes will be handled in accordance with GRM established for each project city, coordinated by the PUSO Support Groups in consultation with the PMU and under the guidance of the LIEC. The GRM is defined in the EMP.

B. Involuntary Resettlement

111. The original project was classified as category B for involuntary resettlement (IR), and the first additional financing project was classified as category C. The original project's compliance with the approved land acquisition and resettlement plan (LARP) was satisfactory. This was confirmed by the Social Monitoring Report which was disclosed on the ADB website in October 2014. The proposed second additional financing complements activities being carried out under the Southeast Gobi Urban and Border Towns Development Project (SGUBTDP: G-0204) involves further wastewater management interventions being developed for the *aimag* centers of Bulgan City (Bulgan province), Chinggis City (Khentii province), Mandalgovi (Dundgovi province), Murun (Khuvsgul province), and Baruun-Urt (Sukhbaatar province). The project is classified as category B as the additional financing will affect the leased land and fixed asset (40 meter deep well) of two private companies which are within the WWTP buffer zone in Chinggis City. Consultations were undertaken with the affected entities during resettlement planning. Replacement land will be allocated while the affected asset will be compensated at replacement cost. A Land Acquisition and Resettlement Plan has been prepared.

112. The government will ensure that (i) the Land Acquisition and Resettlement Plan agreed between the government and ADB is updated if there are any design changes during implementation and submitted to ADB for review and concurrence prior to land acquisition activities, and implemented in accordance with applicable government laws and regulations and

ADB's Safeguard Policy Statement (2009); in case of any inconsistency between government laws and ADB's policy, the latter will prevail; (ii) all affected persons are given adequate opportunity to participate in resettlement planning, updating, and implementation; (iii) counterpart funds for land acquisition and resettlement activities are provided according to the budget and project schedule; (iv) any additional costs in excess of the resettlement plan budget estimates are met within the project schedule; (v) the PMU and PUSO will designate adequate staff and resources to supervise and monitor updating and implementation of the resettlement plan and submit semiannual internal monitoring reports to ADB; and (vi) a functional and effective grievance mechanism is established.

113. The PUSO will not hand-over a specific section of a contract to the civil works contractor until (i) replacement land has been allocated and payment of compensation has been fully disbursed to the affected persons; (ii) affected persons who were compensated for that specific section have vacated the site; and (iii) the specific section is free from any encumbrances.

C. Indigenous Peoples

114. The categorization for indigenous peoples is "C". The project will be implemented in the peri-urban areas where no specific communities of ethnic minorities or groups are living, so there will be no impacts. No adverse impacts are expected. Therefore, ADB's Policy on Indigenous Peoples will not be triggered by this project.

VIII. GENDER AND SOCIAL DIMENSIONS

115. A social, poverty, and gender analysis was undertaken in accordance with ADB guidelines. The poverty and social assessment during project preparation included a desk review of secondary data, a household survey and focus group discussions, and key informant interviews. The information and analysis collected are to assist the design of the project by identifying the poor and economically vulnerable population, examining causes of poverty and recommending poverty reduction measures within the scope of the project.

A. Social and Poverty Benefits

116. Poverty headcount for the project *aimag* centers was estimated at 31.8%, which is higher than the national average. The project *aimags*, with an aggregate urban population of about 115,000 are rapidly growing second-tier cities and together make up about 5.4% of the national urban population as of the end 2017. In 2016, among the five project *aimags* Sukhbaatar (47.0%), Khentii (43.8%), and Bulgan (31.4%) experienced higher poverty rates than the *aimags* of Khuvsgul (29.1%) and Dundgovi (22.8%) which had poverty rates below the national average. Direct beneficiaries of the project are (i) households in private houses and apartment areas (7,005 households of about 30,000 residents) and 905 public and private entities working in Baruun-Urt, Bulgan City, Chinggis City, Mandalgovi and Murun cities; and (ii) school children, hospital patients and other users of public buildings (and eventually *ger* dwellers) benefitting from the fecal sludge removal provided by the vacuum trucks. It will also benefit the poor and vulnerable households in the apartment and *ger* areas by improving their health and reducing health care expenditure due to illness caused by poor water quality and sanitation. The project will increase people's participation, especially the poor and of women, in the process of improving the cities' public services. It is estimated that a total of 256 temporary jobs will be created by the project. Most of the unskilled jobs will be provided to local people, including the poor, at least 30% of which will be provided to women. The implementing agency will ensure that Mongolia's labor laws and core labor standards are followed. Specific measures to ensure that the poverty and social benefits

are in the social and gender action plan (SGAP) are provided in Table 10. The SGAP was prepared to ensure continued consultation and participation of local communities during project implementation. Actions include (i) public awareness program on improved wastewater public services; (ii) consultations and public hearings on wastewater tariff increase; and (iii) targets for employment of local labor, women, and the poor during construction and operation. Implementation will be monitored through the project performance management system, project progress reports, and ADB missions.

B. Gender

117. The current project was classified as effective gender mainstreaming. The current project GAP is still ongoing with about 50% completed activities and 67% achieved targets. The additional financing is also classified as effective gender mainstreaming. The reason for retaining the original categorization is the change of the technical and geographic scope of the additional financing, but with the same components. The additional financing will focus only on improving the quality and reliability of wastewater management services in five additional *aimag* centers in other regions of the country. Therefore, the subproject satisfies the threshold for effective gender mainstreaming, and a combined SGAP has been developed. The PSA indicates that the project benefits men and women equally, including improved living environment, health benefits, and job creation.

118. The SGAP (see Table 10), will facilitate continued consultation and participation of the local communities during project implementation to ensure that (i) people are informed about the project benefits and aware of water and wastewater sanitation issues, (ii) people are informed about possible tariff increase and participate in the public hearings and consultation processes, and (iii) labor rights and entitlements are observed, and that the needs of vulnerable households are considered. SGAP implementation will be monitored through the project performance management system (PPMS), project progress reports, and ADB supervision missions. Implementation and monitoring of SGAP is included in loan assurances.

119. The project will ensure that (i) priority will be given to women for employment, including a 30% target for project employment opportunities during the project construction operation phase; and (ii) women will be participating in the public awareness, consultation and public hearings (at least 40%), and capacity building activities (about 35%). The PMU with the assistance of the PIUs and the project management and implementation consulting firm are responsible for the implementation of the SGAP and reporting on progress and achievements of the project. All activities in SGAP are part of the capacity building component (e.g., training, consultation, awareness raising activities, etc.). Therefore, no additional cost is required specifically for the implementation of SGAP. PIUs together with the PUSOs are responsible for the implementation of the SGAP. The detailed SGAP is provided in Table 10. The PMU and PIUs will monitor contractors' compliance with these project assurances.

C. Other Social Aspects

120. **Communicable diseases.** As ensured in the assurances, construction workers from the local communities will be trained on the prevention and control of communicable diseases and HIV/AIDS through public health and sanitation knowledge campaigns and training, and capacity building will be undertaken to protect their legal labor rights.

121. **Labor issues.** Core labor standards will be implemented. Civil works contracts will stipulate priorities to (i) employ local people for works, (ii) ensure equal opportunities for women

and men, (iii) pay equal wages for work of equal value, (iv) pay women's wages directly to them, (v) not employ children or forced labor, and (vi) ensure that all contracted labor have written contracts. Specific targets for employment have been included in the SGAP.

122. Under the project management consulting service, a social development specialist will be engaged to support the PIUs to implement, monitor, and report on progress of the SGAP and other social aspects. The SGAP will be monitored semiannually and reported via quarterly progress reports.

Table 10: Social and Gender Action Plan

Activity	Target and Indicators	Responsible Party	Budget and Cost	Timing
A. Generate job opportunities to increase income of residents				
256 people employed during project construction and 125 people employed during operation (both skilled and unskilled jobs).	At least 30% female laborers in construction and operation. At least 30% of total women employed are in skilled jobs.	PMU, PIUs, and Contractors	Included in project civil work cost	2018–2020
Prioritize employment of local people in construction	At least 15% of the poor are employed in unskilled jobs during construction and operation			
Ensure training on labor law, job skills, safety, sanitation, and HIV/AIDS to be provided by contractors	100% contracted laborers get training			
B. Establish a Public Consultation and Participation Mechanism				
Awareness campaign on improved public services held	At least 40% of participants in public meetings on project design and construction activities are women	PMU, PIUs and PUSOs	Included in the project cost	2018–2020
Public awareness on wastewater sanitation for residents and industries held	Number of campaigns, consultations, and workshops (40% residents and 30% industries)			
Consultations and public hearing for wastewater treatment tariff organized	Number of consultations and public hearings held (40% of participants are women)			
Urban planning and policy making, including master plans for participating towns strengthened	At least 30% of participants in consultative workshops are women.			
Capacity on project management, strategic planning, and accounting systems strengthened	At least 100 PUSO and local government staff have new knowledge and skills on wastewater operations and management by 2020, of which 35% are women			

HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome, PIU = project implementation unit, PMU = project management unit, PUSO = public utility service organization.

Source: Asian Development Bank.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

Impact the Project Is Aligned with
Current project (original grant and first additional financing)

Economic development and livability in <i>aimag</i> centers (mining and border towns in Southeast Gobi) enhanced (Infrastructure Development Plans for the Southern Gobi and Government Action Plan, 2016–2020) ^a			
Overall project^b Unchanged			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcomes			
Current project Urban governance ^c improved and access to sustainable infrastructure and services expanded in urban places in Southeast Gobi and other <i>aimags</i>	Current project^d a. Water, sewerage, SWM, and heating coverage in planned (non- <i>ger</i>) areas increased from 0% to 95% in <i>soums</i> , and from 95% to 100% in <i>aimag</i> centers, by September 2015 (2010 baseline: Not applicable) b. <i>Ger</i> area population with access to water kiosks within 300 meters of dwelling increased to 95% by September 2015 (2010 baseline: 20%) c. Revenues of service operators increased from 95% to 100% of recurrent costs by September 2015 (2010 baseline: Not applicable) d. 20% reduction in average time women spend on accessing drinking water by September 2015 (2011 baseline: 17.8 minutes) e. New water, sewerage, SWM, and heating use in planned (non- <i>ger</i>) areas increased to 95% in <i>soums</i> , and to 100% in four <i>aimag</i> centers, by 2016 (2010 baseline: <i>Soums</i> 0%, four <i>aimags</i> 95%) f. At least 12,000 m ³ /day of fully treated wastewater discharged in four <i>aimag</i> centers and <i>soums</i> by 2020 (2015 baseline: 0 m ³ /day) g. At least 3 of 4 PUSOs with annual revenues greater than expenses by 2020 (2014 baseline: 1) h. At least 90% of new infrastructure projects started in 2016–2020 follow approved urban master plans in <i>soums</i> and <i>aimag</i> centers by 2020 (2014 baseline: Not applicable)	a. Annual National Statistics Office Yearbook, national government; annual statistics yearbooks of local and <i>aimag</i> governments b–c. Annual statistics yearbooks of local and <i>aimag</i> governments d. Annual audited financial account statements of PUSOs e–f. Annual household survey, PUSOs annual progress reports	Operation-related funds from local governments are not available in a timely manner
Overall project Unchanged	Overall project a–e. Unchanged f. At least 27,000 m ³ /day of fully treated wastewater discharged in nine <i>aimags</i> centers and <i>soums</i> by September 2022 (2015 baseline: 0 m ³ /day; 2018 baseline: 0 m ³ /day)		

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	<p>g. At least 7 of 9 PUSOs with annual revenues greater than expenses by September 2022 (2014 baseline: 1; 2018 baseline: 2)</p> <p>h. At least 90% of new infrastructure projects commenced between 2018 and 2022 followed approved urban master plans in <i>soums</i> and <i>aimag</i> centers by September 2022 (2014 and 2018 baselines: Not applicable)</p> <p>i. <i>Ger</i> area population in five <i>aimag</i> centers with access to pit latrine emptying service increased to 80% by September 2022 (2018 baseline: 20%)</p>		
<p>Outputs Part A</p> <p>Current project</p> <p>1. Infrastructure services reforms including performance-based contracts for urban services delivery implemented</p> <p>2. Urban planning and policy making, including master plans for participating towns strengthened</p> <p>3. Cross-border cooperation established</p> <p>Overall project Unchanged</p> <p>Part B</p> <p>Current project</p> <p>4. Water source development, transmission, storage, and distribution completed</p>	<p>Current project</p> <p>1a. Operating management contracts for provision of basic services in place and operational in both project <i>aimags</i> by November 2014 (2010 baseline: 0)</p> <p>2a. Four urban plans prepared and adopted by the participating <i>aimag</i> and <i>soum</i> governments by November 2014 (2010 baseline: 1)</p> <p>2b. At least 30% of participants in consultative workshops are women (2010 baseline: Not applicable)</p> <p>3a. Zamyn-Uud-Erlian Joint Border Development Commission established with urban development working group (2010 baseline: Not established)</p> <p>Overall project</p> <p>1a. Unchanged (completed)</p> <p>2a.–2b. Unchanged (completed)</p> <p>3a. Unchanged (completed)</p> <p>Current project</p> <p>4a. At least 38 km of transmission and distribution water main installed by September 2015 (2010 baseline: 0)</p> <p>4b. 11 water kiosks constructed and operational in <i>ger</i> areas by September 2015 (2010 baseline: 0)</p>	<p>1a., 2a., 3a. Quarterly project progress reports of PMU</p> <p>2b. Annual gender action plan implementation report, PMU</p> <p>4a–10b. Annual National Statistics Office Yearbook, national government, quarterly project progress reports of PMU</p>	<p>Lack of government support for reforms, regional cooperation, and institutional strengthening</p> <p>Political interference with project implementation</p>

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<p>Overall project Unchanged</p>	<p>4c. Three water reservoirs constructed by September 2015 (2010 baseline: 0)</p> <p>Overall project 4a.–4c. Unchanged (completed)</p>		
<p>Current project 5. Wastewater collection and treatment infrastructure constructed and operationalized</p>	<p>Current project 5a. At least 30 km of sewers installed and operational by 2020 (2010 baseline: 0; 2015 baseline: 28)</p> <p>5b. Four WWTPs of 3,000 m³/day constructed and operational by 2020 (2010 and 2015 baselines: 0)</p>		
<p>Overall Project Unchanged</p>	<p>Overall project 5a.–5b. Unchanged (completed)</p> <p>5c. Four WWTPs of 3,000 m³/day by 2020, and five WWTPs of 3,000 m³/day by 2022 (2010, 2015, and 2018 baselines: 0 m³/day)</p> <p>5d. Five vacuum evacuation trucks delivered and operational by 2022 (2010, 2015, and 2018 baselines: 0)</p>		
<p>Current project 6. District heating infrastructure constructed and operationalized</p>	<p>Current project 6a. Eight heating boilers of 4 megawatts supplied, installed, and operational by September 2015 (2010 baseline: 0)</p> <p>6b. At least 8 km of heating pipeline supplied, installed, and operational by September 2015 (2010 baseline: 0)</p> <p>6c. Three heat distribution centers installed and operational by September 2015 (2010 baseline: 0)</p>		
<p>Overall project Unchanged</p>	<p>Overall project 6a.–6c. Unchanged (completed)</p>		
<p>Current project 7. Surfaced central roads constructed</p>	<p>Current project 7a. About 9 km of concrete access roads constructed by September 2015 (2010 baseline: 0)</p>		
<p>Overall project Unchanged</p>	<p>Overall project 7a. Unchanged (completed)</p>		
<p>Current project 8. Solid waste collection and disposal enhanced</p>	<p>Current project 8a. Two solid waste landfill sites constructed and operational by September 2015 (2010 baseline: 0)</p>		

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<p>Overall project Unchanged</p> <p>Current project 9. Stormwater drainage infrastructure constructed and operationalized</p>	<p>8b. 12 sets of tractors and trailers for solid waste collection supplied and operational by May 2014 (2010 baseline: 0)</p> <p>Overall project 8a.–8b. Unchanged (completed)</p> <p>Current project 9a. At least 2 km of stormwater drainage line installed and operational by September 2015 (2010 baseline: 0)</p> <p>9b. At least 30% of participants in public meetings on project design and construction activities are women (2010 baseline: 0)</p>		
<p>Overall project Unchanged</p> <p>Current project 10. Strategic planning management, and cost recovery for wastewater management strengthened</p> <p>Overall project Unchanged</p>	<p>Overall project 9a.–9b. Unchanged (completed)</p> <p>Current project 10a. At least 100 PUSO and local government staff with new knowledge and skills on wastewater operations and management by 2020, of which 35% are women (2010 baseline: Not applicable)</p> <p>Overall project 10a. Unchanged (completed)</p> <p>10b. At least 300 PUSO and local government staff with new knowledge and skills on wastewater operations and management by 2020, of which 35% are women (2010 baseline: Not applicable)</p>		

Key Activities with Milestones

Outputs 1–3

1. Establish and staff PMU, project implementation units, project steering committee, and *aimag* working groups (Q1 2011).
2. Establish all working arrangements, procedures, and responsibilities for project (Q1 2011).
3. Tender, award, and engage consultants to implement planning reforms and structure plan preparation (Q3 2012).
4. Prepare urban plans for all project towns (Q2 2014).
5. Tender, award, and engage consultants to support development of enhanced regulatory and institutional arrangements for service delivery (Q3 2012, Q4 2016, Q4 2018).
6. Establish and make operational a service delivery organization and prepare rolling annual business and investment plans (Q4 2014).

Outputs 4–10

1. Tender advisory consultancy assistance for preparation of reference designs and management of D&B contracting (Q2 2012).
2. Complete reference designs and prepare D&B and operating management contract documents (Q3 2012).
3. Tender D&B and operating management contract; select preferred tender; and negotiate, prepare, and agree on contract (operating management contract Q4 2014).
4. Establish service provider and commence implementation of priority infrastructure improvements (Q4 2014).
5. Implement construction and rehabilitation of priority infrastructure improvements and new WWTPs (Q2 2013–Q4 2021).
6. Implement the social and gender action plan (throughout project implementation).

Inputs			
Asian Development Bank			
Loan	Grant	Technical Assistance Grant	Technical Assistance Loan
\$19.43 million (current)	\$15.00 million (current)	\$0.00 (current)	\$0.00 (current)
\$20.00 million (additional)	\$0.00 (additional)	\$0.00 (additional)	\$0.00 (additional)
\$39.43 million (overall)	\$15.00 million (overall)	\$0.00 (overall)	\$0.00 (overall)
Cofinancier			
Loan	Grant	Technical Assistance Grant	Technical Assistance Loan
\$0.00 (current)	\$0.00 (current)	\$1.00 million (current)	\$0.00 (current)
\$0.00 (additional)	\$0.00 (additional)	\$0.00 (additional)	\$0.00 (additional)
\$0.00 (overall)	\$0.00 (overall)	\$1.00 million (overall)	\$0.00 (overall)
Government			
\$8.61 million (current)			
\$1.75 million (additional)			
\$10.36 million (overall)			
Assumptions for Partner Financing			
Not applicable			

D&B = design and build, km = kilometer, m³ = cubic meter, PMU = project management unit, PUSO = public utility service organization, Q = quarter, SWM = solid waste management, WWTP = wastewater treatment plant.

^a National Development and Innovation Committee. 2010. *Infrastructure Development Plans for the Southern Gobi*. Ulaanbaatar; and Government of Mongolia. 2016. *Government Action Plan, 2016–2020*. Ulaanbaatar.

^b “Overall project” refers to the current project and the proposed additional financing.

^c Urban governance refers to local government land use planning and allocation to achieve effective spatial development of urban areas, oversight of basic urban services provision, and accountability for carrying out these functions.

^d Refers to the information presented in the Revised Design and Monitoring Framework (Appendix 1) of ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for Additional Financing and Administration of Technical Assistance Grant to Mongolia for the Southeast Gobi Urban and Border Town Development Project*. Manila.

Source: Asian Development Bank.

B. Monitoring

123. **Project performance monitoring.** A project performance management system (PPMS) has already been established and implemented under the current project. The design and monitoring framework (DMF) of the ongoing project has been updated based on the revised design and implementation arrangements for the additional financing project. Throughout the additional financing project implementation, the PPMS, through the project performance report, will track the achievement of outputs and the actual or likelihood of expected outcome achievement. Key milestone dates for activities will also form part of the monitoring. The DMF will be reviewed during project implementation and will be updated as appropriate to reflect changes in the additional financing project and its context. After physical completion the DMF will form the basis of assessment, captured in the project completion report.

124. Indicators for the additional financing project principally focus on the discharge of fully treated wastewater. The wastewater treatment plants are staggered in terms on construction commencement, however, it is anticipated that all plants will be fully operational by 2022. The cubic meters treated per day will be established by averaging the total quantity treated over the last 30-day period, unless another timeframe is more appropriate. Fully treated wastewater will be determined by measuring levels of biological oxygen demand, nitrogen, and phosphorous, for compliance with the government of Mongolia’s national effluent standard for wastewater treatment plants.

125. The other pertinent outcome indicator for the additional financing project is the cost recovery of service operators, and this will be measured through the audited accounts of the five PUSOs, comparing revenues and costs. An updated indicator from the original project, measuring improved governance in urban planning, will measure the congruence between new infrastructure projects commenced between 2018 and 2020 and the newly approved Urban Masterplans in project *soums* and *aimag* centers. Documents from the approval authorities for the relevant infrastructure projects will be cross-referenced with the urban master plan of the relevant *soum* or *aimag*. Construction outputs of sewage lines and WWTPs will be monitored through the supervision consultants and the PUSO supervising engineer.

126. For ongoing monitoring ADB and the government will jointly review the implementation of the project once a year, covering a detailed assessment of the scope, implementation arrangements, institutional, administrative, technical, economic, and financial aspects of the project, achievement of scheduled targets, and other relevant dimensions that could have an effect on the performance of the project. The review will examine the implementation progress and compliance with assurances in the loan agreement. Feedback from PPMS data and information will be analyzed accordingly.

127. **Environmental safeguards monitoring.** The government and MCUD will ensure that laws and regulations of Mongolia governing safeguards, as well as ADB's Safeguard Policy Statement (2009) are followed. The MCUD will ensure that all works contracts under the Project incorporate provisions and budgets for safeguards plans implementation and monitoring. Monitoring will include the following:

- (i) Internal monitoring/supervision and reporting by PUSO Support Groups. During construction, the PUSO Support Groups will be responsible for conducting internal environmental monitoring (consisting mainly of visual site inspection) in accordance with the monitoring plan defined in the EMP. The groups will be supported by the resident engineers and the LIEC of the PMIS. Supervision results will be reported through the resident engineers' quarterly reports to the PMU.
- (ii) EMP compliance monitoring and reporting by the PMO (through PMIS). The PMU (with support of the PMIS) will contract certified environmental firm(s) to conduct periodic environmental quality monitoring in accordance with the monitoring program. These firms will submit two monitoring reports per construction season to the PMU as well as to the *aimag* environmental authorities. The results of project EMP implementation and environmental impact monitoring will be communicated to ADB through the annual project EMP progress reports, developed by the LIEC on behalf of MCUD. The reports will be disclosed on the ADB website and submitted to Ministry of Environment and Tourism.

128. **Social and gender dimensions monitoring.** Monitoring of the social and gender action plan (SGAP) will be incorporated into the PPMS. Clear targets and indicators have been established (refer to Section VIII) and some indicators, such as those regarding participation in public meetings and capacity building, are also captured in the DMF. Assistance will be provided for the executing and implementing agencies by the social development consultant who will help set up effective monitoring systems and work with the relevant staff in the executing and implementing agencies to ensure implementation of the SGAP and collection of sex-disaggregated data, where necessary. The SGAP will be monitored semiannually and reported via the quarterly project progress reports.

C. Review and Evaluation

129. ADB and the government will jointly review the implementation of the project once a year, covering a detailed evaluation of the scope, implementation arrangements, institutional, administrative, technical, economic, financial, achievement of scheduled targets, and other relevant aspects that may have an impact on the performance of the project. The review will examine the implementation progress and compliance with assurances in the loan agreement. Feedback from the PPMS activities will be analyzed. Within 6 months of physical completion of the Project MCUD will submit a project completion report to ADB.⁴¹

130. To ensure that the project continues to be both viable and sustainable, project accounts and the executing agency's audited financial statements, together with the associated auditor's report, will be thoroughly reviewed. A mid-term review (MTR) of the additional financing project will be carried out in Q4 2019 by ADB and the government for the additional financing project period. The MTR will assess implementation status and take appropriate measures—including modification of scope and implementation arrangements, and reallocation of loan proceeds, as appropriate—to achieve the project's outputs and outcome. The MTR will provide an opportunity to update the DMF as required.

131. A final review mission will take place within 6 months after physical completion of the project. The ADB mission will (i) assess project performance against targets and benchmarks including any revision(s) as agreed during the midterm review, (ii) identify any incomplete activities, or unused project funds, and (iii) determine the project satisfaction rating. MCUD will submit a project completion report to ADB within 6 months of physical completion. The MCUD PCR will contain an assessment of the achievement of outputs and the outcome, focusing on indicator targets. In case the project is selected for a project performance evaluation, the project will be subject to more detailed performance evaluation approximately 3 or more years after completion.

D. Reporting

132. As per Table 11, the MCUD will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the progress against the performance targets of DMF indicators, (b) key implementation issues and solutions, (c) updated procurement plan and (d) updated implementation plan for next 12 months; (iii) stand-alone annual environment monitoring reports; and (iv) a project completion report within 6 months of physical completion of the Project.

⁴¹ The project completion report format is available at <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>.

Table 11: Reporting Requirements

Report	Reference	Frequency and Timing
Project Performance Reporting		
<ul style="list-style-type: none"> • PPMS 	Loan agreement, project agreement, PPMS including baseline and progress data	Reconfirmed no later than 3 months after loan effectiveness; used for all monitoring reports
Progress Reporting		
<ul style="list-style-type: none"> • Quarterly progress reports 	Loan agreement, project agreement, PPMS	Quarterly, within one month after the end of each quarter
Financial Performance Reporting		
<ul style="list-style-type: none"> • Audited project accounts and financial statements auditor's report 	Loan agreement, project agreement, PPMS, including auditor's opinion on use of advance fund and statement of expenditures	Not later than six months after the closure of fiscal year (30 June)
Environmental Safeguards Reporting		
<ul style="list-style-type: none"> • Environmental compliance monitoring reports by licensed monitoring institutes/laboratories • Annual EMP progress reports 	IEE, DEIA Loan agreement, PPMS, EMP, Mongolian Law on EIA	Twice per construction season until project completion report is issued. Annual, until project completion report is issued.
Social Reporting (other)		
<ul style="list-style-type: none"> • Social and gender action plan implementation report 	Loan agreement, project agreement, PPMS, SAP	Included quarterly project progress reports.
Project Completion Reporting		
<ul style="list-style-type: none"> • Project completion report 	Loan agreement, project agreement, PPMS, RRP, all above reports, review mission MOUs, statistics and surveys	No later than six months after project completion.

DEIA = detailed environmental impact assessments, EIA = environment impact assessment, IEE = initial environment examination, EMP = environmental management plan, MOU = memorandum of agreement, PPMS = project performance management system, RRP = report and recommendation of the President, SAP =social action plan.

E. Stakeholder Communication Strategy

133. **Environment.** The stakeholder consultation process conducted during the development of the IEE and the DEIAs demonstrated that all sub-components under the additional project have strong local support. In compliance with ADB's Safeguard Policy Statement (2009), environmental information related to the project was and will be disclosed to affected persons as follows: (i) the IEE is disclosed on ADB's project website (www.adb.org), and is available for consultation in the PUSOs' and PMU's offices, (ii) the DEIAs will be approved and disclosed by MET, and (iii) annual reports on the project's compliance with the EMP as well as the PCR will be available at www.adb.org. During project implementation, affected persons will be consulted and informed through formal questionnaire surveys, site visits, and informal interviews by the PUSO Support Group and the LIEC. Public meetings will be organized by the PUSO Support Group prior to mid-term mission to present and discuss EMP implementation progress, solicit community opinions and concerns, and agree on required corrective actions. The LIEC will, prior to the PCR mission, organize a survey to assess community satisfaction with project implementation, additional financing project outputs, and EMP implementation performance. The results will be documented in the PCR.

134. **Social and gender action plan.** Consultations with communities have taken place and will continue at different points in the preparation and implementation of the SGAP within the components and will be designed not only to inform people about the component or specific activities related to its preparation and implementation, but also to enable people in the community to ask questions, make suggestions, state preferences, and express concerns. Special attention will be paid to the participation of women, ethnic minorities and any other vulnerable groups, such

as the poor. SGAP indicators will be monitored and reported semiannually and disclosed to local communities.

X. ANTICORRUPTION POLICY

135. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the Project.⁴² All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all Project contractors, suppliers, consultants, and other service providers. Individuals and entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the Project.⁴³

136. To support these efforts, relevant provisions are included in the loan agreement and the bidding documents for the Project. In particular, all contracts financed by ADB in connection with the Project shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing and implementing agencies and all contractors, suppliers, consultants, and other service providers as they relate to the Project. In relation to the Project, the executing and implementing agencies will ensure that (i) a supervisory body is established to prevent undue interference in business practices, and adequate resources are made available for its effective operation; (ii) a leading group of officials from the supervision division of the executing and implementing agencies is located in offices involved in bidding, installation, and other operational activities under the Project; and (iii) periodic inspections on the contractor's activities related to fund withdrawals and settlements are carried out. The executing and implementing agencies shall also initiate liaison meetings with the Prosecutor's Office, as needed, to discuss any warnings about, or information on, alleged corrupt, fraudulent, collusive, or coercive practices relating to the investment program.

137. The executing and implementing agencies will disclose to the public, and update annually the current status of the Project and how the proceeds of the Project are used. For each contract financed under the Project, the executing and implementing agencies will disclose on their respective websites information on, among others, the (i) list of participating bidders; (ii) name of the winning bidder; (iii) basic details on bidding procedures and procurement methods adopted; (iv) amount of contract awarded; (v) list of goods/services, including consulting services procured; and (vi) intended and actual utilization of the facility proceeds.

XI. ACCOUNTABILITY MECHANISM

138. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected persons should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.⁴⁴

⁴² Available at <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>.

⁴³ ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>.

⁴⁴ For further information see <http://www.adb.org/Accountability-Mechanism/default.asp>.

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

139. All revisions or updates during course of implementation are retained in this Section to provide a chronological history of changes to implemented arrangements recorded in the PAM.

No.	PAM changes or updates	Date	Remarks
1	Initial Draft	26 April 2018	First draft provided to executing agency during fact-finding mission