



Mongolia: Darkhan Wastewater Management Project

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|--|---|---|--|----------------------------|-------------------|---|--|--|-------------------|---|--|--|-----------------|
| Project Name | Darkhan Wastewater Management Project | | | | | | | | | | | | |
| Project Number | 37697-025 | | | | | | | | | | | | |
| Country | Mongolia | | | | | | | | | | | | |
| Project Status | Active | | | | | | | | | | | | |
| Project Type / Modality of Assistance | Loan Technical Assistance | | | | | | | | | | | | |
| Source of Funding / Amount | <table border="1"><tr><td colspan="2">Loan 3244-MON: Darkhan Urban Utility Institutional Improvement Action Plan</td></tr><tr><td>Ordinary capital resources</td><td>US\$ 9.45 million</td></tr><tr><td colspan="2">Loan 3245-MON: Darkhan Urban Utility Institutional Improvement Action Plan</td></tr><tr><td>concessional ordinary capital resources lending / Asian Development Fund</td><td>US\$ 9.05 million</td></tr><tr><td colspan="2">TA 8841-MON: Darkhan Urban Utility Institutional Improvement Action Plan</td></tr><tr><td>Urban Environmental Infrastructure Fund under the Urban Financing Partnership Facility</td><td>US\$ 400,000.00</td></tr></table> | Loan 3244-MON: Darkhan Urban Utility Institutional Improvement Action Plan | | Ordinary capital resources | US\$ 9.45 million | Loan 3245-MON: Darkhan Urban Utility Institutional Improvement Action Plan | | concessional ordinary capital resources lending / Asian Development Fund | US\$ 9.05 million | TA 8841-MON: Darkhan Urban Utility Institutional Improvement Action Plan | | Urban Environmental Infrastructure Fund under the Urban Financing Partnership Facility | US\$ 400,000.00 |
| Loan 3244-MON: Darkhan Urban Utility Institutional Improvement Action Plan | | | | | | | | | | | | | |
| Ordinary capital resources | US\$ 9.45 million | | | | | | | | | | | | |
| Loan 3245-MON: Darkhan Urban Utility Institutional Improvement Action Plan | | | | | | | | | | | | | |
| concessional ordinary capital resources lending / Asian Development Fund | US\$ 9.05 million | | | | | | | | | | | | |
| TA 8841-MON: Darkhan Urban Utility Institutional Improvement Action Plan | | | | | | | | | | | | | |
| Urban Environmental Infrastructure Fund under the Urban Financing Partnership Facility | US\$ 400,000.00 | | | | | | | | | | | | |
| Strategic Agendas | Environmentally sustainable growth Inclusive economic growth | | | | | | | | | | | | |
| Drivers of Change | Governance and capacity development Partnerships | | | | | | | | | | | | |
| Sector / Subsector | Water and other urban infrastructure and services - Urban policy, institutional and capacity development - Urban sewerage | | | | | | | | | | | | |
| Gender Equity and Mainstreaming | Some gender elements | | | | | | | | | | | | |
| Description | The project will support environmentally sustainable urban development and improved living standards in Darkhan City, Mongolia. It will improve the city's wastewater management infrastructure and service delivery through (i) a modern wastewater treatment plant (WWTP), (ii) improved sewer system and pumping stations, and (iii) institutional capacity development and policy dialogue. The project will promote poverty alleviation supporting of a city with 27% poverty incidence and contribute to a more balanced national urban system and strengthened urban-rural relationships by supporting urban and industrial development of a second tier city in Mongolia. The project will contribute to improved cross-border water quality management by improved water quality of the Kharaa River that drains into the Baikal Lake in the Russian Federation. | | | | | | | | | | | | |

Project Rationale and Linkage to Country/Regional Strategy

Darkhan Uul-Aimag is Mongolia's third largest province with a registered population of 92,000 and an urban population in Darkhan City (Darkhan Soum) of 72,000, of which estimated 40% live in ger areas. Poverty incidence is significant at 27% city-wide and 44% in ger areas respectively. The city is located 220 kilometers (km) north of Ulaanbaatar and 130 km south of the Russian Federation border. Darkhan enjoys favorable conditions for farming and is rich in mineral deposits. It was founded as an industrial hub in 1961, and benefits from the Trans-Mongolian rail line and an ADB supported road that connects Ulaanbaatar with Darkhan and the Lake Baikal region. Few industrial investments were made in recent years resulting in a slight population loss. To strengthen development of secondary cities and to mitigate migration of people to Ulaanbaatar, where almost half of the country's population resides, in 2012, the government identified Darkhan to become a national model city for urban sustainability and livability with a vision of "smart and green city" by 2028. An Urban Development Master Plan for Darkhan, is under preparation. The government plan for Darkhan includes improvements of existing urban districts and ger areas, urban expansion in the form of new industrial and residential areas, strengthened academic institutions, and expanded and new public parks and environmental protection zones. By 2020, the registered population in Darkhan Soum is estimated to grow to 83,000 with 75% of the population living in formalized and fully serviced residential districts. These industrial and residential developments will cause increase in demand for urban services, including water supply and wastewater treatment. Investment in infrastructure is needed to meet present and future demand from improved and expanded services, and to support clustering of new businesses and industries.

The city's WWTP, and the sanitary sewer system and pumping stations, were built in 1965 and partially updated and expanded in 1987. They are in urgent need of structural rehabilitation, replacement or upgrade of equipment. The WWTP was significantly oversized with a capacity of 50,000 cubic meters per day (m³/day) and was never fully utilized. It currently operates at 8,000 to 10,000 m³/day (summer and winter) with peak flows of 15,000 m³/day. Many components are underutilized or unused and dilapidated. Even the operating units are in need of serious repair. The sewer system has a total of 223 km with 65% built in 1965. In the recent past, domestic investments financed the rehabilitation of sewers. For this project, three priority sewer sections and two pumping stations have been identified. Sanitation in ger areas is currently in the form of on-plot pit latrines causing soil and groundwater pollution. Currently, wastewater is not collected in ger areas however, plans for incremental extension of the sewer network into ger areas are being prepared for government financing. The WWTP treats domestic sewage together with non-toxic industrial wastewater. Some industrial pre-treatment plants remove toxic elements (e.g., from sheepskin processing). A slight temperature and precipitation increase is expected due to climate change. However, increased evaporation will cause slight reduction of surface water and slightly reduced water flow in the Kharaa River which drains into the Baikal Lake. Darkhan's central water supply system serving the formal urban areas was recently improved, while service in ger areas is provided through water kiosks, some of which are connected to the central water supply system. In some areas, kiosks are replenished by trucks. Incremental expansion of the centralized pipe network into ger areas is planned with the assistance of the Cities Development Initiative for Asia. Breakdowns of the current system cause untreated water to discharge into the groundwater and the Kharaa River. Without the project, the existing WWTP would further rapidly deteriorate and fail, as the remaining life of the facility has been estimated at just 2 years. Moreover, anticipated urban and industrial growth could not be served by wastewater management services.

The proposed water and other urban infrastructure and services project targets environmentally sustainable urban development and improved living standards in Darkhan City, Mongolia. The project will directly benefit more 50,000 residents and indirectly more than 80,000 residents and support improvement of the city's wastewater management, its central WWTP, sewer system, and pumping stations. The project will support institutional development, training, project management, and policy dialogue. The proposed project was requested by the Government of Mongolia for ADB consideration.

The project is in line with ADB's country partnership strategy for Mongolia, 2012_2016. With its objective of inclusive economic and environmentally sustainable growth, the project is aligned with ADB's Strategy 2020 and follows ADB's Urban and Water Operational Plans, and green city initiatives. The proposed project is aligned with the Government Action Plan, 2012_2016, including its objectives of improving centralized wastewater systems in aimag centers, enforcing the Law on Water Supply and Sewer Use, and supporting the expansion of industrial development in Darkhan City. Lessons learned have been and will be considered from previous urban and water sector projects in Mongolia. Lessons include (i) wastewater treatment technology selection after thorough screening of recently tested projects and proposals; and (ii) procurement management, including the choice of design, and build and operation assistance as modality to procure the WWTP package to ensure accountability and mitigate risks. The project supports the sustainability of and complements previous ADB assistance to Darkhan. To structurally rehabilitate and newly equip an existing WWTP will be a demonstration feature of the project and serve as a model for other cities in the region with comparable conditions.

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| Impact | Better living conditions and an improved environment in Darkhan soum (district) and the Kharaa River basin |
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Project Outcome

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| Description of Outcome | Improved system of wastewater collection and treatment for domestic and industrial in Darkhan soum |
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| Progress Toward Outcome | The ICB contract to design, supply and install a new wastewater treatment plant is advertised. Rehabilitation of two pumping stations and operational support to Darkhan Us Suvag during the defect liability period will be carried out as part of the WWTP package (Output 1). Detailed design and bidding documents for NCB contracts to construct 1.3 km dual insulated heating pipeline and sewer for WWTP are under the preparation (Output 2). |
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Implementation Progress

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| Description of Project Outputs | 1. Improved WWTP 2. Rehabilitated pumping stations and sewer pipes 3. Project management support and capacity development |
| Status of Implementation Progress (Outputs, Activities, and Issues) | Not yet due Not yet due Not yet due |
| Geographical Location | |

Safeguard Categories

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|--------------------------|---|
| Environment | B |
| Involuntary Resettlement | B |
| Indigenous Peoples | C |

Summary of Environmental and Social Aspects

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| Environmental Aspects | The project is classified as category B for environment since it is not expected to have unprecedented or irreversible impacts on the environment. A draft initial environmental examination, including an environmental management plan, has been prepared in compliance with ADB's Safeguard Policy Statement (2009) and the Government of Mongolia's regulatory framework. Short-term impacts are anticipated during construction, including dust and noise generated during sewer line replacement activities, as well as inappropriate solid and liquid waste management from construction sites which could pollute the Kharaa River. Mitigation measures have been defined in the environmental management plan to reduce these impacts to acceptable levels. During operation, no significant environmental impact is anticipated. O&M training, as well as treatment performance monitoring, will minimize operational impacts and risks. The project will have substantial environmental and socioeconomic benefits. The strengthening of Darkhan's municipal wastewater collection and treatment capacity will provide protection and improvement to Kharaa River's water environment. The project outcome will not be affected by climate variability and change. The projected increase in average and peak precipitation, and the related risk of increased urban stormwater runoff, is adequately addressed by Darkhan Uul-Aimag through separate wastewater and stormwater collection systems. |
| Involuntary Resettlement | The project is classified as category B for involuntary resettlement as it will not have significant LAR impacts. No residential land or structures will be affected by the project. A resettlement plan for the project was prepared in compliance with the Safeguard Policy Statement and endorsed by DAG and MCUD, disclosed to the affected persons, and uploaded on ADB's website on 12 August 2014. A total of eight entities will be affected, including two small enterprises, three commercial entities, and three state budget institutions. Five affected entities will lose a total of 2,711.1 square meters of land. All losses are partial. Land plots are possessed by the state institutions and private companies. Fences and gates of three entities with a total length of 112 meters will be affected. Other affected structures include, entrance stairs to two shops, a speed bump, and a bill-board. Two businesses will experience a temporary impact. Compensation for lost assets and resettlement allowances will be paid to affected persons. The PMU under the MCUD will be responsible for all management, communication, and coordination work during project preparation and implementation. The PIU under DAG has overall responsibility for LAR. This includes preparation, implementation, financing, and interagency coordination of all related tasks. The MCUD is experienced in implementing ADB-funded and LAR activities. Training and support will be provided to both the PMU and PIU by the loan implementation resettlement consultant to ensure smooth implementation. A grievance redress mechanism will be established, and semiannual monitoring and evaluation of resettlement plan implementation will be conducted by the PIU, with assistance of the loan implementation resettlement consultant. The DAG confirmed all funds for involuntary resettlement compensation will be available on time |
| Indigenous Peoples | The project is classified as category C for indigenous people. No specific communities of ethnic minorities or groups are living in concentrated areas and no adverse impacts are expected. |

Stakeholder Communication, Participation, and Consultation

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| During Project Design | Consultations with key stakeholders were held during project design. These included focus group discussions with residents, staff, and management who were involved in the community and with utility service operations. During TA implementation, public consultations will be held to design the resettlement plan with active participation of the poor, women, and vulnerable population. The project will ensure that the poor and disadvantaged population will also participate in consultations on tariff reform to ensure service charges are at affordable levels. |
| During Project Implementation | Consultations with key stakeholders will be held during project implementation. These will include focus group discussions with residents, staff, and management who are involved in the community and with utility service operations. The project management unit (PMU) with support of consultants will undertake consultations with key stakeholders. Communication with stakeholders will be managed by the environmental and/or social safeguards specialist. The PMU will ensure local stakeholders are consulted, that information on the project is disseminated, and that questions and complaints are addressed quickly and effectively. |

Business Opportunities

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| Consulting Services | All consultants will be recruited according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). |
| Procurement | All procurement of goods and civil works will follow ADB's Procurement Guidelines (2015, as amended from time to time). |

Responsible Staff

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| Responsible ADB Officer | Badarch, Tuul |
| Responsible ADB Department | East Asia Department |
| Responsible ADB Division | Mongolia Resident Mission |
| Executing Agencies | <i>Ministry of Construction and Urban Development Ulaanbaatar 211238 Barilgachdyn Talbai 3 Mongolia</i> |

Timetable

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|---------------------|----------------------------|
| Concept Clearance | 28 May 2014 |
| Fact Finding | 21 Apr 2014 to 02 May 2014 |
| MRM | - |
| Approval | 16 Dec 2014 |
| Last Review Mission | - |
| Last PDS Update | 16 Mar 2017 |

Loan 3244-MON

| Milestones | | | | | |
|-------------|--------------|------------------|-------------|-------------|--------|
| Approval | Signing Date | Effectivity Date | Closing | | |
| | | | Original | Revised | Actual |
| 16 Dec 2014 | 05 Jun 2015 | 25 Aug 2015 | 30 Jun 2019 | 30 Nov 2020 | - |

| Financing Plan | | | Loan Utilization | | | |
|----------------|--------------------------------|--|----------------------------|------|--------|----------------|
| | Total (Amount in US\$ million) | | Date | ADB | Others | Net Percentage |
| Project Cost | 11.63 | | Cumulative Contract Awards | | | |
| ADB | 9.45 | | 16 Dec 2014 | 1.84 | 0.00 | 19% |
| Counterpart | 2.18 | | Cumulative Disbursements | | | |
| Cofinancing | 0.00 | | 16 Dec 2014 | 0.59 | 0.00 | 6% |

Loan 3245-MON

| Milestones | | | | | |
|-------------|--------------|------------------|-------------|-------------|--------|
| Approval | Signing Date | Effectivity Date | Closing | | |
| | | | Original | Revised | Actual |
| 16 Dec 2014 | 05 Jun 2015 | 25 Aug 2015 | 30 Jun 2019 | 30 Nov 2020 | - |

| Financing Plan | | | Loan Utilization | | | |
|----------------|--------------------------------|--|----------------------------|------|--------|----------------|
| | Total (Amount in US\$ million) | | Date | ADB | Others | Net Percentage |
| Project Cost | 9.05 | | Cumulative Contract Awards | | | |
| ADB | 9.05 | | 16 Dec 2014 | 0.00 | 0.00 | 0% |
| Counterpart | 0.00 | | Cumulative Disbursements | | | |
| Cofinancing | 0.00 | | 16 Dec 2014 | 0.00 | 0.00 | 0% |

TA 8841-MON

| Milestones | | | | | |
|-------------|--------------|------------------|-------------|---------|--------|
| Approval | Signing Date | Effectivity Date | Closing | | |
| | | | Original | Revised | Actual |
| 16 Dec 2014 | 12 Jan 2015 | 12 Jan 2015 | 30 Jun 2017 | - | - |

| Financing Plan/TA Utilization | | | | | | Cumulative Disbursements | | |
|-------------------------------|-------------|-------------|---------------|-----------------|--------|--------------------------|-------------|------------|
| ADB | Cofinancing | Counterpart | | | | Total | Date | Amount |
| | | Gov | Beneficiaries | Project Sponsor | Others | | | |
| 0.00 | 400,000.00 | 30,000.00 | 0.00 | 0.00 | 0.00 | 430,000.00 | 16 Dec 2014 | 239,565.39 |

Project Page <https://www.adb.org/projects/37697-025/main>

Request for Information <http://www.adb.org/forms/request-information-form?subject=37697-025>

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