



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

---

Project Number: 49169-002  
August 2018

## Proposed Loans and Administration of Loan and Grants Mongolia: Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Sector Project

This is the version of the document approved by ADB's Board of Directors that excludes information that is subject to exceptions to disclosure set forth in ADB's Public Communications Policy 2011.

Asian Development Bank

## **CURRENCY EQUIVALENTS**

(as of 1 August 2018)

Currency unit	–	togrog (MNT)
MNT1.00	=	\$0.00041
\$1.00	=	MNT2,464.50

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
AMC-DBM	–	Asset Management Company of the Development Bank of Mongolia
CPP	–	community participation plan
DBM	–	Development Bank of Mongolia
EDAF	–	eco-district and affordable housing fund
ESMS	–	environmental and social management system
FIL	–	financial intermediation loan
GCF	–	Green Climate Fund
ha	–	hectare
HLTF	–	High-Level Technology Fund
km	–	kilometer
m <sup>2</sup>	–	square meter
MUB	–	Municipality of Ulaanbaatar
PAM	–	project administration manual
SDP	–	sector development plan
SGAP	–	social and gender action plan
VLSP	–	voluntary land swapping plan

## **NOTE**

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

<b>Vice-President</b>	Stephen Groff, Operations 2
<b>Director General</b>	Amy S.P. Leung, East Asia Department (EARD)
<b>Director</b>	Sangay Penjor, Urban and Social Sectors Division, EARD
<b>Team leader</b>	Arnaud Heckmann, Senior Urban Development Specialist, EARD
<b>Team members</b>	Tuul Badarch, Senior Project Officer (Infrastructure), EARD Ruth Benigno, Associate Project Analyst, EARD Christian Ellermann, Climate Change Specialist, Sustainable Development and Climate Change Department (SDCC) Enerelt Enkhbold, Senior Investment Officer, EARD Seung Min Lee, Financial Sector Specialist, EARD Christina Pak, Senior Counsel, Office of the General Counsel Mailene Radstake, Senior Safeguards Specialist (Resettlement), EARD Arun Ramamurthy, Senior Public Management Specialist (ICT and e-Governance), SDCC Michael Rattinger, Senior Climate Change Specialist, SDCC Shotaro Sasaki, Senior Environment Specialist, EARD Gohar Tadevosyan, Social Development Specialist (Safeguards), EARD
<b>Peer reviewers</b>	Joris van Etten, Senior Urban Development Specialist, SDCC Biao Huang, Senior Investment Specialist, Private Sector Operations Department Sung Su Kim, Finance Sector Specialist, SDCC

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

## CONTENTS

	<b>Page</b>
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Rationale	1
B. Impacts and Outcome	3
C. Outputs	3
D. Summary Cost Estimates and Financing Plan	4
E. Implementation Arrangements	6
III. DUE DILIGENCE	7
A. Technical	7
B. Economic and Financial	7
C. Governance	8
D. Poverty, Social, and Gender	8
E. Safeguards	9
F. Summary of Risk Assessment and Risk Management Plan	11
IV. ASSURANCES AND CONDITIONS	12
V. RECOMMENDATION	12
APPENDIXES	
1. Design and Monitoring Framework	13
2. List of Linked Documents	16

## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number:</b> 49169-002	
<b>Project Name</b>	Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Sector Project	<b>Department /Division</b>	EARD/EASS
<b>Country Borrower</b>	Mongolia Mongolia	<b>Executing Agency</b>	Ulaanbaatar Municipal Government
<b>2. Sector</b>	<b>Subsector(s)</b>	<b>ADB Financing (\$ million)</b>	
✓ <b>Water and other urban infrastructure and services</b>	Other urban services		20.00
	Urban housing		25.00
	Urban policy, institutional and capacity development		25.00
	Urban slum development		10.00
	<b>Total</b>		<b>80.00</b>
<b>3. Strategic Agenda</b>	<b>Subcomponents</b>	<b>Climate Change Information</b>	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	CO <sub>2</sub> reduction (tons per annum)	200,000
Environmentally sustainable growth (ESG)	Eco-efficiency Global and regional transboundary environmental concerns Urban environmental improvement	Climate Change impact on the Project	Medium
		<b>ADB Financing</b>	
		Adaptation (\$ million)	55.00
		Mitigation (\$ million)	25.00
		<b>Cofinancing</b>	
		Adaptation (\$ million)	91.30
		Mitigation (\$ million)	56.70
<b>4. Drivers of Change</b>	<b>Components</b>	<b>Gender Equity and Mainstreaming</b>	
Governance and capacity development (GCD)	Anticorruption Civil society participation Institutional development Organizational development	Effective gender mainstreaming (EGM)	✓
Knowledge solutions (KNS)	Application and use of new knowledge solutions in key operational areas		
Partnerships (PAR)	Commercial cofinancing Civil society organizations Implementation International finance institutions (IFI) Official cofinancing Private Sector		
Private sector development (PSD)	Promotion of private sector investment Public sector goods and services essential for private sector development		
<b>5. Poverty and SDG Targeting</b>		<b>Location Impact</b>	
Geographic Targeting	Yes	Urban	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG7, SDG8, SDG11, SDG13		
<b>6. Risk Categorization:</b>	Complex		
<b>7. Safeguard Categorization</b>	<b>Environment: B Involuntary Resettlement: B Indigenous Peoples: C</b>		
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>80.00</b>	
Sovereign Sector (Concessional Loan): Ordinary capital resources		20.00	
Sovereign Sector (Regular Loan): Ordinary capital resources		60.00	
<b>Cofinancing</b>		<b>148.00</b>	
Green Climate Fund - Sector grant (Full ADB Administration)		50.00	
Green Climate Fund - Sector loan (Full ADB Administration)		95.00	
High Level Technology Fund - Sector grant (Full ADB Administration)		3.00	

Source: Asian Development Bank

This document must only be generated in eOps.

15062018181354190883

Generated Date: 19-Jun-2018 15:15:15 PM

**PROJECT AT A GLANCE**

<b>Counterpart</b>	<b>342.10</b>
Beneficiaries	63.90
Government	35.00
Others	243.20
<b>Total</b>	<b>570.10</b>

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on proposed loans to Mongolia for the Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Sector Project. The report also describes (i) the proposed administration of a loan to be provided by the Green Climate Fund (GCF), and (ii) the proposed administration of grants to be provided by the GCF and High-Level Technology Fund (HLTF)<sup>1</sup> for the project, and if the Board approves the proposed loans, I, acting under the authority delegated to me by the Board, approve the administration of the GCF loan, GCF grant, and HLTF grant.

2. The project will deliver sustainable and comprehensive solutions to transform the substandard, climate-vulnerable, and heavily polluting *ger* areas (paras. 3–4) of Ulaanbaatar city into affordable, low carbon, climate-resilient, and livable eco-districts. It will leverage private sector investment to (i) deliver 10,000 affordable green housing units;<sup>2</sup> and (ii) redevelop 100 hectares (ha) of *ger* areas into eco-districts.<sup>3</sup>

## II. THE PROJECT

### A. Rationale

3. Following the transition from a centrally planned to a market-based economy in 1991, Mongolia has experienced rapid rural–urban migration, mainly caused by (i) extreme climate events, such as droughts and severe winter conditions (*dzud*), combined with poor veterinary services and livestock management; and (ii) adoption in 2003 of a policy giving each citizen access to about 700 square meters (m<sup>2</sup>) of urban land.<sup>4</sup> Inadequate infrastructure investments, housing policies, and urban planning regulations to accommodate the migrant population led to the formation of vast peri-urban areas, named *ger* areas after the Mongolian yurts (*gers*) around Ulaanbaatar’s central districts.<sup>5</sup> In 2017, the population of *ger* areas was estimated at 850,000 people, that is 60% of the city’s population of 1.46 million, and 30% of the country’s population.

4. *Ger* areas are settlements of low- and middle-income households characterized by loosely aligned plots, with irregular and unpaved pathways. Dwellings in *ger* areas are unserved detached solid houses and *gers*,<sup>6</sup> poorly insulated, using inefficient coal and biomass-fired stoves generating large amounts of carbon dioxide emissions and air pollution, especially during winter.<sup>7</sup> Most households have land tenure. Poor sanitation, with most households relying on open pit latrines, coupled with poor solid waste collection create unsanitary living conditions. Residents have limited access to water, which is being supplied via water kiosks, and access to public space

---

<sup>1</sup> Financing partner: the Government of Japan.

<sup>2</sup> Green housing maximizes climate (i) mitigation measures through the use of resource- and energy-efficient building technique and materials, renewable energy systems, and operation and maintenance to maintain building performance and occupational health; and (ii) adaptation measures to reduce the vulnerability of *ger* area residents to harsh winters, flood events, hot summers, and soil pollution.

<sup>3</sup> Eco-district development is a highly integrated urban planning and development process at the neighborhood level, using local responses to build green and sustainable development throughout the city.

<sup>4</sup> Average land plots measure 500 m<sup>2</sup>. In January 2017, the mayor issued an order to restrict the access of rural people without official permits to urban areas. In December 2017, the policy was extended until January 2020.

<sup>5</sup> The central districts of Ulaanbaatar are formed by apartment blocks with comprehensive utility services, including dedicated district heating, piped water supply, and wastewater collection and treatment services.

<sup>6</sup> Of the *ger* area population, 56% lives in solid houses and 44% in traditional *gers*.

<sup>7</sup> Air pollution causes health problems such as cardiovascular and respiratory diseases. World Bank. 2011. *Air Quality Analysis of Ulaanbaatar: Improving Air Quality to Reduce Health Impacts*. Washington DC.

and facilities, commercial areas, and economic amenities is lacking.<sup>8</sup> This situation (i) makes *ger* areas highly vulnerable to climate change impacts and intensifies their carbon emissions; (ii) increases the cost of doing business, discourages investors and developers, and inhibits both economic integration and urban redevelopment processes; and (iii) affects vulnerable groups—mostly women, children, elderly, and disadvantaged persons. Incremental growth and migration are increasing the population living in these poor conditions, because affordable housing options for low- and middle-income households are limited. A 2016 survey by the Capital City Housing Corporation estimated housing demand at 150,000 units, while available affordable housing stock is about 4,000 units; with 60% of *ger* areas residents willing to move to apartment units if acceptable and affordable solutions are proposed.<sup>9</sup>

5. In 1997, the Government of Mongolia and the Asian Development Bank (ADB) developed a legal and policy framework for the housing sector. Under the National Housing Strategy, housing policies were made demand-driven with new standards and regulations.<sup>10</sup> In 2002, ADB approved the first housing finance project, which introduced long-term mortgage lending to the banking system.<sup>11</sup> In 2006, the Mongolian Mortgage Corporation was set up to create a pool of long-term funds to stimulate a secondary mortgage market. Housing finance expanded from 2013 through the government's 8% mortgage program. However, stringent mortgage access conditions and a lack of housing products for low-income households meant the mortgage program mainly served the upper middle-income households, creating an oversupply of high-end market housing products. The program is currently suspended. Recently, the government and the Municipality of Ulaanbaatar (MUB) initiated a series of programs to increase the supply of affordable housing units, and support *ger* area redevelopment.<sup>12</sup> The objective is to deliver up to 130,000 housing units through the redevelopment of *ger* areas and the development of new areas. However, a lack of viable solutions, infrastructure investment, financing support to developers, and sustainable housing financing mechanisms have resulted in these programs not developing into implementable plans. The few residential blocks that were initiated focused on lowering construction costs, to the detriment of community well-being and sustainable urban planning, and lacked energy-efficient and renewable energy features.

6. Through the ADB-financed Ulaanbaatar Urban Services and Ger Areas Development Investment Program, MUB is extending basic urban and social services to upgrade economic hubs or subcenters in *ger* areas and provide an enabling environment for urban redevelopment and private and public investments.<sup>13</sup> This provides an opportunity to implement onsite solutions for households to access apartments within their communities by integrating housing solutions

<sup>8</sup> Water consumption in *ger* areas is about 10 liters per capita per day, about half the minimum recommended by the World Health Organization in similar contexts. The cost is 2–10 times more than for residents of other areas.

<sup>9</sup> For medium and low income households, housing costs are considered affordable if rent or mortgage payments and utilities fees) is within 30% of gross monthly income. Affordability and willingness to pay of households below the seventh income decile are estimated at about MNT1.2 million (\$490) per m<sup>2</sup> for a 35 m<sup>2</sup> apartment, while average market price was about MNT2.6 million (\$1,070) per m<sup>2</sup>, based on the December 2017 currency exchange rate.

<sup>10</sup> In 1999, the government approved the Housing Law, National Housing Strategy, Housing Privatization Law, and Condominium Law.

<sup>11</sup> ADB. Mongolia: [Housing Finance \(Sector\) Project](#). The project allowed the establishment of a market-based housing finance system in Mongolia and the first mortgage finance law approved by the Parliament.

<sup>12</sup> MUB is also known as the Governor's Office of the Capital City Ulaanbaatar. Government initiatives included the (i) establishment on 6 July 2013 of the State Housing Corporation, which was tasked with implementing 40,000 affordable housing units nationwide; and (ii) Rental Housing Program, approved by the Cabinet on 18 June 2015. MUB's main initiatives are the (i) City Housing Program, approved by Resolution 17/17 of the city council in 2014; (ii) Affordable Housing Strategy for Ulaanbaatar, approved on 28 May 2015 by the city council; and (iii) Capital City Housing Corporation, established in August 2015.

<sup>13</sup> ADB. Mongolia: [Ulaanbaatar Urban Services and Ger Areas Development Investment Program](#).



into an urban renewal program. In addition, in November 2017 the government issued a resolution ordering the Development Bank of Mongolia (DBM) to establish the first green development fund to promote green urban development and economy, making DBM a key partner to leverage the private sector for green housing finance.<sup>14</sup> International housing projects and Ulaanbaatar housing and redevelopment experience show that a complete solution—integrating housing, infrastructure, urban development, and financing support to both the supply and demand sides—is the best way to create a paradigm shift to improve access to green affordable housing, and resilient and low-carbon urban development.<sup>15</sup>

## B. Impacts and Outcome

7. **Impacts and outcome.**<sup>16</sup> The project is aligned with the following impacts: living conditions in Mongolia improved; and Ulaanbaatar is a safe, healthy, and green city that is resilient to climate change, and provides a livable environment for its residents.<sup>17</sup> The project will have the following outcome: access to low-carbon and climate-resilient eco-districts and green affordable housing in Ulaanbaatar *ger* areas increased. The project is consistent with ADB's country partnership strategy for Mongolia, 2017–2020, and with the core themes of green, competitive, and inclusive cities of ADB's Urban Operational Plan.<sup>18</sup>

## C. Outputs

8. The project will have three outputs: (i) resilient urban infrastructure, public facilities, and social housing units in *ger* areas constructed (public sector component);<sup>19</sup> (ii) long-term financing to developers for low-carbon affordable housing, market rate housing, and economic facilities in *ger* areas and to households for green mortgages increased (financial intermediation loan [FIL] component); and (iii) sector policy reforms implemented and capacity strengthened. Output 1 will deliver (i) green social housing units with climate adaptation and mitigation features; and (ii) resilient infrastructure, public space, and public facilities. Under output 2, up to \$75.7 million of the GCF loan will be made available under the proposed FIL to enable an eco-district and affordable housing fund (EDAF) to provide long-term debt financing (denominated in local currency) to eligible commercial banks to support real estate developers' participation in the low-carbon housing market, and produce affordable green mortgages. Output 3 will support (i) project implementation; (ii) eco-district feasibility and development, policy improvement on climate change adaptation and mitigation, and improved supply and access to affordable green housing units; (iii) detailed design and supervision; and (iv) sustainable green housing finance.<sup>20</sup>

<sup>14</sup> Based on the resolution, the Asset Management Company of the DBM (AMC-DBM) was tasked to manage the fund.

<sup>15</sup> Lessons were mainly derived from the following projects: (i) Mexican programs of Hipoteca Verde (green mortgage) and EcoCasa that provided low interest loans to developers for eco-affordable housing, (ii) Singapore's public-private partnership design on a build-and-sell scheme, (iii) Thailand's Baan Eua-Arthorn project, (iv) Hong Kong's public housing program, and (v) ADB's sector project to develop poor communities in the Philippines. ADB. Philippines: [Development of Poor Urban Communities Sector Project](#).

<sup>16</sup> The design and monitoring framework is in Appendix 1.

<sup>17</sup> State Great Khural. 2016. *Mongolia Sustainable Development Vision 2030*. Ulaanbaatar; State Great Khural. 2013. *Priorities 1 and 2 of Adjustments to the Ulaanbaatar City Urban Development Master Plan 2020 and Development Directions 2030*. Ulaanbaatar.

<sup>18</sup> ADB. 2017. *Country Partnership Strategy: Mongolia, 2017–2020—Sustaining Inclusive Growth in a Period of Economic Difficulty*. Manila; and ADB. 2013. *Urban Operational Plan, 2012–2020*. Manila.

<sup>19</sup> Social housing refers to rental housing.

<sup>20</sup> The project's institutional and policy improvement will guide the transformational impacts and paradigm shift with respect to regulations, standards, and sector capacity for (i) climate-responsive urban planning; (ii) increased performance, energy efficiency, and renewable energy in buildings; (iii) improved supply and access to low-carbon affordable housing; (iv) sustainable green housing finance; and (v) eco-efficient urban services.

9. **Eco-district parameters.** The project eco-districts will be low-carbon, climate-resilient, mixed-income, and mixed-use areas with approximately 30% public space. The project's five phases will deliver about 20 eco-districts or subprojects, with each covering an average of 5 ha. Phase 1 include two core subprojects (10 ha) in Bayankhoshuu and Selbe subcenters, phases 2–3 will have 8 subprojects (40 ha), and phases 4–5 will have 10 subprojects (50 ha). Each subproject should be completed within 5 years.<sup>21</sup> Phases 2–5 will identify and prepare a batch of subprojects to be appraised based on eligibility and selection criteria, including financial and physical parameters, formulated from the feasibility study of the two core subprojects.<sup>22</sup> A detailed infrastructure and architectural design produced for each subproject will ensure (i) adequate ratio for social (15%), affordable (55%), and market rate (30%) housing units; (ii) balance between public space and amenities, commercial areas, and residential units; and (iii) financial viability and rentability to allow private sector participation. The redevelopment process and housing construction will be undertaken onsite, and will be demand-driven.

10. **Sector lending with financial intermediation loan component modality.** The sector lending modality was deemed the most appropriate modality to achieve the project objectives because (i) a large number of subprojects in the sector are to be financed; (ii) the government and MUB have sector development plans (SDPs) to ensure the priority development needs of the cross sectoral policy improvement plan are met, and to guide project implementation; (iii) sector and institutional capacity analyses<sup>23</sup> have shown that the government and MUB have adequate institutional capacity to implement the SDPs and the project; and (iv) policies applicable to the sector are deemed appropriate and will be improved, if warranted (paras. 5–6). The project will support the government and MUB in translating their SDPs into implementable investments, and coordinated policies, actions, and institutional improvement.<sup>24</sup>

11. Financial and institutional arrangements will facilitate the application of a blended finance strategy using the FIL modality. The FIL modality will leverage private resources through the EDAF to be established and managed by the Asset Management Company of DBM (AMC-DBM) on behalf of the Ministry of Finance.<sup>25</sup> The EDAF will be established as a private investment fund structured as a revolving fund, and will be used to onlend a portion of the GCF loan to participating commercial banks. Based on eligibility and selection criteria, commercial banks will use the GCF loan proceeds to support housing supply and demand: (i) for supply, the EDAF will provide medium-term loans to selected private developers, which will be combined with the developers' equities and additional loans by DBM and participating commercial banks to implement output 2; and (ii) for demand, the loan proceeds will be converted into low-cost long-term mortgages to home buyers for purchases of the affordable housing and market rate housing units.

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

12. The project is estimated to cost \$570.1 million. The investment component of the project

<sup>21</sup> The phased approach will allow project parameters to be adjusted based on socioeconomic changes.

<sup>22</sup> Subproject eligibility and selection criteria are in para. 30 of the Project Administration Manual (PAM) (accessible from the list of linked documents in Appendix 2).

<sup>23</sup> Financial Management Assessment (accessible from the list of linked documents in Appendix 2).

<sup>24</sup> The SDPs are in the Sector Assessment (Summary): Water and Other Urban Infrastructure and Services (accessible from the list of linked documents in Appendix 2) and the sector reform plan is in the section I.G of the PAM.

<sup>25</sup> The EDAF establishment requirements are in Schedule 5 of the Loan Agreement: Ordinary Operations (Concessional) (accessible from the list of linked documents in Appendix 2). Based on Government Resolution 135 and DBM Board of Directors Resolution 66 dated 23 August 2017, DBM established AMC-DBM and acquired a special license for investment management services. In accordance with Financial Regulatory Commission Resolution 241 dated 15 December 2017, AMC-DBM received the right to establish and manage investment funds.

comprises outputs 1 and 3 and will cost \$157.0 million (Table 1). Output 2, which will be delivered through an FIL component, will require an estimated \$413.1 million. Detailed cost estimates by expenditure and by financier are included in the project administration manual (PAM).<sup>26</sup> The investment component will support civil works, with necessary equipment, design and construction supervision; and project management, including safeguards and due diligence.

**Table 1: Summary Investment Plan**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Costs<sup>b</sup></b>	
1. Output 1: Resilient urban infrastructure, public facilities, and social housing units in <i>ger</i> areas constructed (public sector component)	93.5
2. Output 3: Sector policy reforms implemented and capacity strengthened	33.6
<b>Subtotal (A)</b>	<b>127.1</b>
<b>B. Contingencies<sup>c</sup></b>	<b>23.4</b>
<b>C. Financial Charges During Implementation<sup>d</sup></b>	<b>6.5</b>
<b>Total (A+B+C)</b>	<b>157.0</b>

<sup>a</sup> Includes taxes and duties of \$13.16 million. Such amount does not represent an excessive share of the project cost. Taxes and duties will be financed by the government through exemptions, or the MUB will provide funds to pay such taxes and duties, in accordance with relevant laws and regulations.

<sup>b</sup> In mid-2017 prices as of April 2018.

<sup>c</sup> Physical contingencies were computed at 10% for civil works. Price contingencies were computed at average of 1.5% on foreign exchange costs, and 7% on local currency costs, and include provisions for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Includes service fees, and interest and commitment charges. Interest during construction has been computed (i) at 2% per annum for the concessional ordinary capital resources loan, and (ii) at the 5-year US dollar fixed swap rate plus an effective contractual spread of 0.5%, a maturity premium of 0.1%, and a commitment charge of 0.15% per year (the interest and commitment charges during construction to be capitalized in the loan) for the ordinary capital resources loan. The financing charges for the Green Climate Fund loan used a service fee of 0.25% per annum and a commitment fee of 0.50% of the undisbursed portion of the loan.

Source: Asian Development Bank estimates.

13. The summary financing plan is in Table 2. For the investment loan component, the government has requested (i) a concessional loan of \$20 million; and (ii) a regular loan of \$60 million, both from ADB's ordinary capital resources, to help finance the project. The concessional loan will have a 25-year term, including a grace period of 5 years, an interest rate of 2.0% per year during the grace period and thereafter, and such other terms and conditions set forth in the draft loan and project agreements. The regular loan will have a 25-year term, including a grace period of 5 years, an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, and such other terms and conditions to be set forth in the loan and project agreements. Based on the straight line repayment method, the average maturity is 15.25 years. The government will relend the proceeds of the ADB loans to MUB on terms and conditions satisfactory to ADB, which will be combined with a \$35 million MUB counterpart fund to finance output 1 and a portion of output 3, i.e., project management support and detailed design. MUB will finance 35.5% of taxes and duties through exemptions, or will provide funds to pay such taxes and duties in accordance with relevant laws and regulations. HLTF will provide a \$3 million grant to finance a smart renewable energy and building performance control and monitoring system. The GCF will provide grant cofinancing equivalent to \$50 million and loan cofinancing equivalent to \$95 million, to be administered by ADB as an accredited entity. The GCF loan will have a 40-year term, including a 10-year grace period, annual principal repayments from year 11 to year 20 equivalent to 2% of the initial principal, and from year 21 to year 40 equivalent to 4%, and such other terms and conditions set forth in the draft GCF loan agreement. The interest and commitment charges during implementation will be

<sup>26</sup> PAM (accessible from the list of linked documents in Appendix 2).

capitalized as part of the GCF loan. Under output 1, about \$19.3 million of GCF loan will be relented to MUB and about \$12.1 million GCF grant will be passed on to MUB to finance climate change mitigation investments (such as solar panels). Under output 3, \$7.6 million of the GCF grant will be passed on to MUB and DBM to finance consulting services.

**Table 2: Summary Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
<b>A. Investment Project Components</b>		
1. Asian Development Bank		
Concessional ordinary capital resources (loan)	20.0	12.7
Ordinary capital resources (loan)	60.0	38.2
Subtotal (1)	80.0	50.9
2. Green Climate Fund (grant) <sup>a</sup>	19.7	12.6
3. Green Climate Fund (loan) <sup>a</sup>	19.3	12.3
4. High-Level Technology Fund (grant) <sup>b</sup>	3.0	1.9
5. Municipality of Ulaanbaatar	35.0	22.3
<b>Subtotal (A)</b>	<b>157.0</b>	<b>100.0</b>
<b>B. Financial Intermediation Loan Component</b>		
1. Green Climate Fund (grant) <sup>a</sup>	30.3	7.3
2. Green Climate Fund (loan) <sup>a</sup>	75.7	18.3
3. Development Bank of Mongolia/commercial banks	111.4	27.0
4. Developers	131.8	31.9
5. Beneficiaries	63.9	15.5
<b>Subtotal (B)</b>	<b>413.1</b>	<b>100.0</b>
<b>Total (A and B)</b>	<b>570.1</b>	

<sup>a</sup> Administered by the Asian Development Bank.

<sup>b</sup> Financing partner: the Government of Japan. Administered by the Asian Development Bank.

Source: Asian Development Bank estimates.

14. For the FIL component, the government will invest about \$75.7 million of the GCF loan proceeds into the EDAF to finance output 2. AMC-DBM will manage the EDAF, which will serve as the apex financial institution for the project funds to be channeled to financial intermediaries.<sup>27</sup> It is estimated that GCF loan proceeds, reforms in green finance under the project, will lead to DBM and other participating commercial banks to contribute \$111.4 million, developers to finance \$131.8 million in the form of equity participation, and beneficiaries to contribute \$63.9 million from their own resources. Moreover, about \$30.3 million of the GCF grant will be passed on to MUB to provide performance-based grants through a green building facility to qualified private developers for climate change mitigation and adaptation features. Climate mitigation is estimated to cost \$81.7 million and climate adaptation is estimated to cost \$146.6 million. ADB will finance 30.6% of mitigation costs and 37.5% of adaptation costs. Details are in the PAM.

## E. Implementation Arrangements

15. The implementation arrangements are summarized in Table 3 and described in detail in the PAM (footnote 26).

**Table 3: Implementation Arrangements**

Aspects	Arrangements
Implementation period	September 2018–December 2026
Estimated completion date	31 December 2026
Estimated loans and grants closing date	30 June 2027
Management	

<sup>27</sup> Apex mechanisms usually involve financial institutions through which donor-funded FILs are channeled to a second layer of financial intermediaries, which will in turn onlend such loan proceeds to the subborrowers.

Aspects	Arrangements		
(i) Oversight body	A project steering committee headed by the Municipality of Ulaanbaatar (MUB), will comprise government officials from the Ministry of Finance, Ministry of Environment and Tourism, MUB relevant departments and agencies, Ministry of Construction and Urban Development, Development Bank of Mongolia (DBM), and the Capital City Housing Corporation, will be established to oversee project implementation and provide strategic and policy guidance.		
(ii) Executing agency	MUB		
(iii) Key implementing agency	DBM		
(iv) Implementation units	MUB project management office under the mayor of Ulaanbaatar for the public sector component and project implementation unit under the Asset Management Company of the DBM (AMC-DBM) for the financial intermediation loan component.		
Procurement	For the financial intermediation loan component, developers will undertake procurement of goods and civil works in accordance with commercial practices acceptable to the Asian Development Bank (ADB).		
	International competitive bidding (including procurement in loans to financial intermediaries for works/commercial practice)	8 contracts	\$40.49 million
	National competitive bidding	5 contracts	\$6.54 million
	Community procurement package	8 contracts	\$0.20 million
Consulting services	Quality- and cost-based selection	1,350 person-months	\$12.53 million
	Quality-based selection	42 person-months	\$0.20 million
Advance contracting <sup>a</sup>	Advance contracting for recruitment of consulting services has been requested by MUB. MUB has been informed that ADB's support for advance contracting does not commit ADB to approve the loan project or to finance the recruitment costs.		
Disbursement	The loan and grant proceeds will be disbursed following ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

<sup>a</sup> Subject to the ratification of amendment of the National Procurement Law, prior to loan effectiveness.

Source: Asian Development Bank.

### III. DUE DILIGENCE

#### A. Technical

16. This includes comparative analyses, technical specifications, sustainability, design methods, standards, and cost estimates specific to *ger* areas and cold climate, and in line with national standards. The specifications applied to eco-district design will match the principles of energy and resource conservation and promotion of renewable energy best practices.

#### B. Economic and Financial

17. The project is economically viable. The resulting base-case economic internal rates of return of the core subprojects are 11.26% to 15.53%, exceeding the ADB prescribed minimum discount rate of 9%, confirming they are economically robust, with anticipated economic and health benefits arising from reduced environmental pollution that exceed the estimated economic costs. Sensitivity analysis showed that the subprojects will remain economically viable under various scenarios. A financial analysis was carried out to assess the viability of the revenue-generating core subprojects to be financed using the GCF grant and loan proceeds under output 2. The financial analysis was undertaken from the developer's perspective. Financial revenues were derived from the sale of affordable housing and market rate housing units, as well as the sale of parking spaces and commercial lots for shops and offices. Base case financial internal rates of return for the Bayankhoshuu core subproject is 20.75%, and for the Selbe core subproject is 21.61%, exceeding the estimated weighted average cost of capital of 5.49%. Sensitivity analysis showed that the core subprojects were vulnerable to decreases in revenues. Under output 1, a financial sustainability analysis of MUB was conducted in lieu of estimating the

core subprojects' financial rates of return. It confirmed MUB has the capacity to absorb the debt servicing and operation and maintenance requirements of the core subprojects. Financial due diligence for the FIL component was carried out on XacBank as a sample representative bank in Mongolia. XacBank qualifies as a participating bank and meets ADB's performance standards in terms of capital adequacy, asset quality, management, earnings, and liquidity. The bank was deemed financially viable and capable of meeting financial obligations, including debt service payments. A debt sustainability assessment was conducted and the bank's financial standing was assessed to be sufficiently robust to absorb the related credit risks of the subprojects as well as the interest rate and exchange rate risks. The integrity due diligence carried out on XacBank showed that there are no significant integrity risks.

### C. Governance

18. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government, MUB, and DBM. The specific policy requirements are described in the PAM. The financial management risk of MUB is *moderate* as it has established a fully functional project management office that is currently implementing ongoing ADB projects (footnote 13). Also, MUB developed and made operational a financial management system that incorporates ADB's loan and grant disbursement policies and procedures. Refinements to the system to accommodate changes will be provided by the project capacity development support. The financial management assessment on AMC-DBM indicated two significant risks and corresponding mitigating measures: (i) as a newly established entity, AMC-DBM may lack the capability to manage the EDAF outright, and DBM has provided assurance that it will assign or engage qualified and experienced staff to AMC-DBM; and (ii) because AMC-DBM lacks prior experience in managing ADB disbursements and is not familiar with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time), AMC-DBM has committed to undertake the needed staff training to comply with ADB's loan disbursement policies and procedures. Capacity building support, incorporating relevant financial management training, will complement AMC-DBM's planned risk mitigating measures. All procurement financed by ADB will be carried out in accordance with ADB's Procurement Guidelines (2015, as amended from time to time) and Guidelines on the Use of Consultants (2013, as amended from time to time).<sup>28</sup>

### D. Poverty, Social, and Gender

19. The project's direct beneficiaries include 10,000 households who will have access to housing units and a total of about 17,000 households that will benefit from both living and working in 100 ha of *ger* areas developed into eco-districts. A total of 229 households, living within the perimeter of the core subprojects located in Bayankhoshuu and Selbe subcenters, will benefit from onsite redevelopment through the voluntary land swapping mechanism, and about 2,000 households will benefit from living and working in fully developed eco-districts. To ensure full realization of the benefits, the community participation plan (CPP) and social and gender action plan (SGAP) include a public awareness component, an education program, consultations, and participation activities.<sup>29</sup> The CPP and SGAP will ensure continued consultation with and participation of the local communities and guide the community mobilization and consultation processes throughout implementation.

<sup>28</sup> Universal procurement will apply per ADB. 2013. *Blanket Waiver of Member Country Procurement Eligibility Restrictions in Cases of Cofinancing for Operations Financed from Asian Development Fund Resources*. Manila.

<sup>29</sup> The CPP is in section XI of the Voluntary Land Swapping Plan (accessible from the list of linked documents in Appendix 2).

20. The project is categorized *effective gender mainstreaming*. The SGAP presents specific effective gender mainstreaming measures and outlines the strategies to address key gender concerns with respect to access to services and livelihood opportunities to be provided by the project, and to ensure that project components will be gender-responsive, appropriate, and affordable to its target users, especially vulnerable households. The CPP and SGAP also include measures to (i) facilitate and support the affected communities to avoid any loss of livelihood and business; (ii) support vulnerable households that lack the financial means to afford better houses through skills training and linkages with job opportunities, training, and financial institutions; (iii) identify and integrate beneficiary community needs in project design documents; (iv) sustain awareness and support for the project by different stakeholders; (v) mobilize and organize beneficiary community members to support the development and implementation of houses and infrastructure; and (vi) facilitate effective monitoring and evaluation of the different aspects of these components. Consulting services—185 person-months of inputs (45 international and 140 national)—will be provided to support MUB in establishing the mechanisms, and implementing and monitoring the CPP and SGAP.

## E. Safeguards

21. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.<sup>30</sup>

22. **Environment (category B).** An initial environmental examination, environmental management plan, and environmental assessment and review framework were prepared in compliance with ADB's Safeguard Policy Statement.<sup>31</sup> The anticipated environmental impacts during construction include dust and noise, temporary traffic disturbance, and risks to community and workers' health and safety. The demolition of *ger* houses will not produce toxic waste as *ger* houses are not made from toxic materials. Demolished housing materials will be disposed at landfill sites approved by MUB. Affected plot owners and local communities were consulted on any issues or concerns they have with the project. Mitigation measures defined in the environmental management plan, such as construction site management and regular monitoring of the environmental performance during construction and operation, will minimize the anticipated impacts and construction-related health and safety concerns. Ensuing subprojects with similar components are expected to be category B for environment as no category A subproject will be financed under the project. The carbon emission reduction estimated for the project is 200,000 tons of carbon dioxide equivalent per year, equal to 8 million tons of carbon dioxide equivalent during the project lifetime (40 years). The project will also contribute to black carbon reduction of about 83 tons per year.<sup>32</sup>

23. **Involuntary resettlement (category B).** For output 1, a resettlement framework has been prepared in accordance with ADB's Safeguard Policy Statement for areas outside the project eco-districts' perimeters where involuntary resettlement impacts are expected. The resettlement framework will serve as a guide for screening project for involuntary resettlement impacts, and for preparation and implementation of land acquisition and resettlement plans. Infrastructure construction impacts outside the perimeters of the eco-districts—such as widening of roads and construction of utilities to connect the eco-districts with main trunk infrastructure— will be avoided or mitigated to the extent possible. The selection criteria for the redevelopment blocks include

<sup>30</sup> ADB. [Safeguard Categories](#).

<sup>31</sup> Initial Environmental Examination, and Environmental Assessment and Review Framework (accessible from the list of linked documents in Appendix 2).

<sup>32</sup> In line with the Climate and Clean Air Coalition objectives. Black carbon particles are components of fine particulate matter formed by the incomplete combustion of biomass or fossil fuels.

proximity to the main trunk infrastructure, so that connections can be provided with a minimum of involuntary resettlement impacts. Activities with category A involuntary resettlement impacts will be excluded.

24. **Voluntary land swapping.** The project will implement a demand-driven approach within the perimeters of the project eco-districts, based on a voluntary land swapping mechanism, supported by voluntary land swapping plans (VLSPs).<sup>33</sup> The proposed resettlement is voluntary in nature as households will be provided with an option to participate or not.<sup>34</sup> Each VLSP will cover landowners and non-landowners, with provisions for poor and vulnerable households as well as for affected persons under ADB's Ulaanbaatar Urban Services and Ger Areas Development Investment Program (footnote 13).<sup>35</sup> Depending on the socioeconomic situation of each household, an affordable housing solution will be proposed through a land and asset swap agreement, a rent-to-own scheme, or an affordable rental scheme.<sup>36</sup> Meaningful consultations are incorporated in the three stages of project cycle (identification, feasibility, and detailed design) to ensure that potential beneficiaries are fully informed about the project and its implications, and to build a consensus among households living on a plot of land regarding whether or not to participate in the project. Such consultations will also help to address concerns of potential beneficiaries, and any adverse impacts.<sup>37</sup> If households on a plot decide not to participate after undertaking consultations, the proposed eco-district will be redesigned to avoid the non-participating plot.<sup>38</sup> Notwithstanding that the proposed resettlement for the project eco-districts is voluntary, the VLSPs will be prepared and implemented to avoid or minimize impacts during the transition period, and improve the standard of living of the potential beneficiaries, especially the poor and other vulnerable households.

25. A VLSP has been prepared for two core subprojects (Selbe and Bayankhoshuu). The potential beneficiaries of the two core subprojects include 78 landowners and 52 non-landowners in Selbe and 64 landowners and 35 non-landowners in Bayankhoshuu.<sup>39</sup> The VLSP specifies the (i) principles of and procedures for voluntary land and/or asset swapping, based on transparency, consistency, and fairness;<sup>40</sup> (ii) meaningful consultation and participation during identification, feasibility study, detailed design, and implementation to ensure that participation of landowners

---

<sup>33</sup> The VLSP has been designed to maximize the project benefits to the local population by promoting an "in-situ" mechanism that preserves the fabric of communities and improves the quality of housing and urban infrastructure at an affordable cost.

<sup>34</sup> Specifically, a plot of land within the perimeter of an eco-district will be included in an eco-district redevelopment only if the residents of the plot (including owners and non-owners of the plot) are willing to participate.

<sup>35</sup> Affected people under other ADB projects implemented in *ger* areas, including ADB's ongoing Ulaanbaatar Urban Services and Ger Areas Development Investment Program, will have priority access to affordable housing with subsidized mortgages, or rent and rent-to-own housing.

<sup>36</sup> For non-landowners or renters, priority access will be given to rental or social housing based on rent-to-own or rental schemes, depending on their income. For poor households (belonging to the income decile categories from 1 to 3), the monthly housing costs (including rent and utility fees) will not exceed 25% of the monthly income of one household. For the most vulnerable households, specific measures will be taken to ensure that they will not pay more than they currently do for their rent and/or utilities services. Additionally, targeted employment and training program will be implemented for poor households.

<sup>37</sup> Potential coercive practices are mitigated by the consultation process; verification by an independent external monitor; and a grievance redress mechanism with documentation of consultation meetings, grievances, and actions taken to address such grievances.

<sup>38</sup> The location, design, and shape of an eco-district is not predetermined. It will be developed and adapted based on the willingness of households living on a plot to participate and can change until finalization of the detailed design.

<sup>39</sup> Based on the sample socioeconomic survey in Table 37 in the VLSP, it is estimated that there are 69 poor and vulnerable households. The numbers will be verified during detailed design.

<sup>40</sup> A written record of consultations and willingness to participate surveys undertaken during the identification and feasibility study are presented in the VLSP.



and non-landowners is based on an informed decision that is free of intimidation or coercion; (iii) land and asset valuation methodology, which is based on replacement cost;<sup>41</sup> (iv) support to potential beneficiaries, especially the poor and vulnerable households, through access to social housing, cash grants, and livelihood improvement programs; (v) written record of ownership of the apartment unit for landowners as well as other housing arrangements (including social housing) for non-landowners; (vi) establishment of a grievance redress mechanism that requires proper documentation of grievances, and actions taken to address such grievances; (vii) budget requirements and availability of funds for community engagement, green economy and business opportunity development, provision of a training and capacity building program for livelihood improvement, consulting services, management and administration costs, and external monitoring; (viii) institutional arrangements and support from project implementation consultants, with clear roles and responsibilities; (ix) setting up of internal monitoring; and (x) engagement of an external monitor to validate the process and procedures set out in the VLSP, specifically the validation of the negotiation process. VLSP implementation will be closely monitored and supervised by ADB. The VLSP for the two core subprojects has been reviewed and cleared by ADB, and disclosed to potential beneficiaries (on 27 May 2018, with a revised version disclosed on 5 July 2018).<sup>42</sup> Eco-district development for subsequent subprojects will have similar VLSPs.

26. **Indigenous peoples (category C).** No specific community of ethnic minority or ethnic group has been identified and no adverse impact is expected.

27. **Financial intermediaries (category B).** An environmental and social management system (ESMS) will be adopted. For core subprojects, an ESMS arrangement was prepared and, based on a due diligence of XacBank, it was found that XacBank has adequate institutional capacity to implement ADB's Safeguard Policy Statement procedural and substantive requirements contained in the ESMS. An ESMS will be developed by each participating commercial bank prior to loan disbursement. Financial intermediaries will ensure that there will be no subproject classified as category A for involuntary resettlement and the environment. A subproject under the voluntary land swapping agreement shall be considered for financing, provided that a VLSP has been prepared for the subproject, disclosed to the beneficiaries, and cleared by ADB.

## F. Summary of Risk Assessment and Risk Management Plan

28. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>43</sup>

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

Risks	Mitigation Measures
Lack of availability of loans from commercial banks, and equity contribution by the developers	Due diligence and consultations will be carried with respect to banking and private sector capacity and interest at the beginning of each implementation phase. Eco-district designs and sizes can be modified to adjust to economic

<sup>41</sup> For landowners, a written record of land swap agreements will be prepared during the detailed design of each subproject (i.e., each eco-district development block), and after the valuations of the land and other immovable properties have been agreed upon and finalized. Beneficiaries who will not enter into such land swap agreements are eligible for access to subsidized social housing, cash grants, and livelihood improvement programs. Written records of housing arrangement agreements (rent or rent-to-own schemes under social housing) will be prepared.

<sup>42</sup> For site selection, the VLSP should demonstrate that less than 15% of households over a minimum of 4 ha area are unwilling to participate. For eco-district implementation, the VLSP should demonstrate that 100% of households over a minimum of 3 ha area are willing to participate. These two conditions have been met by the core subprojects.

<sup>43</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

Risks	Mitigation Measures
	and financial challenges, and to ensure the eco-districts' financial feasibility.
Financial sustainability adversely affected by lack of financial management skills and insufficient utility tariff adjustments	Consultants will provide training and capacity development on sustainable O&M of the new facilities, tariff setting, and financial management. While tariffs will be adjusted over time to cover O&M costs, the government will cover any funding gap if tariff revenues are insufficient.
Unclear and tedious screening and selection parameters of beneficiaries	Well-defined parameters based on income, property, taxes, and addresses will be further developed during implementation and will be enforced at the commercial bank level through the capacity building and auditing process.
Voluntary land swapping agreements and detailed design by selected private firms not enforced	Bidding documents for developers will reflect detailed design parameters and specifications prepared by the PMO for each eco-district. Penalties will apply if the bidding document detailed design specifications are not followed.

O&M = operation and maintenance, PMO = project management office.  
Source: Asian Development Bank.

**IV. ASSURANCES AND CONDITIONS**

29. The government, MUB, and DBM have assured ADB that implementation of the project shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and loan documents. The government, MUB, and DBM have agreed with ADB on certain covenants for the project, which are set forth in the draft loan, grant, and project agreements.<sup>44</sup>

**V. RECOMMENDATION**

30. I am satisfied that the proposed loans would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

- (i) the loan of \$60,000,000 to Mongolia for the Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Sector Project, from ADB’s ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB’s London interbank offered rate (LIBOR)-based lending facility; for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board; and
- (ii) the loan of \$20,000,000 to Mongolia for the Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Sector Project, from ADB’s ordinary capital resources, in concessional terms, with an interest charge at the rate of 2% per year for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao  
President

3 August 2018

<sup>44</sup> Nonstandard disbursement conditions include (i) delivery of executed subsidiary loan agreement between the Ministry of Finance and MUB; (ii) EDAF lending policies and guidelines acceptable to ADB; (iii) an ESMS established by each qualified commercial bank acceptable to ADB; and (iv) templates acceptable to ADB for (a) participation agreement between AMC-DBM and a qualified commercial bank; (b) sub-loan agreement between a qualified commercial bank and qualified developer; (c) mortgage agreement for affordable housing units between a qualified commercial bank and a qualified homebuyer; (d) legal agreement among MUB, DBM-AMC, and a qualified developer setting out affordability parameters; (e) land and asset swap agreement; (f) housing arrangement agreement, and (g) procurement template for the selection and supervision of qualified developers.

## DESIGN AND MONITORING FRAMEWORK

<b>Impacts the Project is Aligned with</b>			
Living conditions in Mongolia improved (Mongolia Sustainable Development Vision 2030) <sup>a</sup> Ulaanbaatar is a safe, healthy, and green city that is resilient to climate change, and provides a livable environment for its residents (Priorities 1 and 2 of Adjustments to the Ulaanbaatar City Urban Development Master Plan 2020 and Development Directions 2030) <sup>b</sup>			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Risks</b>
<b>Outcome</b> Access to low-carbon and climate-resilient eco-districts and green affordable housing in Ulaanbaatar <i>ger</i> areas increased	<b>By 2028:</b> a. At least 7,000 households, of which 30% are headed by women, relocated into, or have ownership and/or rental titles for social and affordable housing units in the 100 ha of eco-districts in <i>ger</i> areas (2017 baseline: 0) b. Energy consumption per housing unit built in targeted areas reduced to 150 kWh/m <sup>2</sup> /year (2017 baseline: 395 kWh/m <sup>2</sup> /year) c. 200,000 tons of carbon dioxide emission per year avoided (2017 baseline: 0) d. 6,000 person-months per year of employment opportunities for operation and maintenance of facilities and infrastructure created, of which 40% are filled by women (2017 baseline: 0)	a. MUB annual report on urban construction and district records b. MUB and NOSK annual report on urban construction and social housing c.–d. MUB record on urban construction, and eco-districts' records on business and employment	Continued tight fiscal conditions and changed government priorities shift resources away from affordable housing programs.
<b>Outputs</b> 1. Resilient urban infrastructure, public facilities, and social housing units in <i>ger</i> areas constructed (public sector component)	<b>By 2026:</b> 1a. 1,500 social housing units constructed (2017 baseline: 0) 1b. 13.7 km of road, 5.5 km of water supply pipes, 6.1 km of sewerage network, 5.5 km of district heating pipes, and 450 low-consumption street lights constructed (2017 baselines: 0) 1c. 15 ha of public space and green areas, and 36,000 m <sup>2</sup> of public facilities constructed (2017 baselines: 0) 1d. 72,000 m <sup>2</sup> of photovoltaic solar panels installed (2017 baseline: 0) 1e. 100% of constructed buildings equipped with energy-efficient insulation, utility metering, and heating regulation systems (2017 baseline: 0) 1f. 2,000 m <sup>2</sup> of greenhouses in targeted areas built (2017 baseline: 0) 1g. Smart monitoring system and sensors for building performance and renewable energy control installed, including energy storage pilot of 0.5-megawatt capacity (2017 baseline: 0) 1h. 100,000 person-months of employment opportunities during project construction created, of which 30% are filled by women (2017 baseline: 0)	1a.–g. MUB and eco-districts' annual report on urban construction  1h. Contractors annual employment records	Changed government and/or MUB leadership leads to lower support for the project.  Rising world prices of energy and construction materials significantly increase the project's investment and operation and maintenance costs.
2. Long-term financing to developers for low-carbon affordable housing, market-rate housing, and economic facilities in <i>ger</i> areas and to households	<b>By 2026:</b> 2a. At least 20 developer subloans approved and released by EDAF (2017 baseline: 0) These subloans will produce: (i) 5,500 affordable housing and 3,000 market-rate housing units built (2017 baseline: 0) (ii) 204,000 m <sup>2</sup> of commercial facilities, shops, and parking; and 22 km of pedestrian and bike lanes built (2017 baseline: 0) (iii) 79,000 m <sup>2</sup> of greenhouses installed (2017 baseline: 0) (iv) 100% of constructed buildings equipped with	2a. EDAF and commercial banks' financial records 2a.(i)–(iv) MUB and eco-districts' annual report on business development and urban construction	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
for green mortgages increased (financial intermediation loan component)	<p>energy efficient insulation, utility metering, and heating regulation systems (2017 baseline: 0)</p> <p>2b. At least 5,500 green mortgages approved and released, with at least 30% of households headed by women provided with access to affordable housing units (2017 baseline: 0)</p> <p>2c. At least 40% of businesses located in the commercial facilities in the eco-districts are led by women</p> <p>2d. 200,000 person-months of employment opportunities during project construction created, of which 30% are filled by women (2017 baseline: 0)</p>	<p>2b. Commercial banks' mortgage records</p> <p>2c–2d. MUB and eco-districts' annual report on business development and urban construction</p>	
3. Sector policy reforms implemented and capacity strengthened	<p><b>Project implementation and management</b></p> <p>3.1a. By 2019, gender-disaggregated project performance and management system established (2017 baseline: 0)</p> <p><b>Eco-district feasibility and development</b></p> <p>3.2a. By 2020, green building and eco-district norms and standards are in place (2017 baseline: 0)</p> <p>3.2b. By 2021, regulations for grid-connected electricity generation from small-scale renewable sources are in place (2017 baseline: 0)</p> <p>3.2c. By 2020, regulation to enable viability gap funding of subprojects through eco-district utilities tariff cross-subsidy mechanism approved</p> <p>3.2d. By 2026, 40% of the overall jobs created within the perimeter of each eco-district benefit local communities, at least 40% of job-holders are women, and 15% vulnerable people (2017 baseline: 0)</p> <p><b>Sustainable green housing finance</b></p> <p>3.3a. By 2020, the EDAF is established and structured in accordance with the applicable Mongolian law and requirements (2017 baseline: 0)</p>	<p>3.1a. PMO monitoring report</p> <p>3.2a.–d. Policy and regulation orders from related agency or ministry (Ministry of Construction and Urban Development, Ministry of Energy, Energy Regulation Commission, MUB)</p> <p>3.3a. Policy and regulation orders from the MOF and the Financial Regulation Commission</p>	

<p><b>Key Activities with Milestones</b></p> <p><b>1: Resilient urban infrastructure, public facilities, and social housing units in ger areas constructed (public sector component)</b></p> <p><b>2: Long-term financing to developers for low-carbon affordable housing, market rate housing, and economic facilities in ger areas and to households for green mortgages increased (financial intermediation loan component)</b></p> <p><b>Phase 1 (10 ha, 2 core subprojects)</b></p> <p>1.1a Complete infrastructure and architectural detailed design (2019–2020)</p> <p>1.1b Update and implement the VLSP (2019–2024)</p> <p>1.1c Procure goods and works (2020–2021)</p> <p>1.1d Construct and commission infrastructure, social housing units, social facilities, and public space (2020–2022)</p> <p>2.1a Shortlist commercial banks (2020)</p> <p>2.1b Select developers (2020)</p> <p>2.1c Construct and commission affordable housing and market housing units, and commercial areas (2021–2024)</p> <p>2.1d Sell housing units and approve subloan mortgages (2021–2025)</p> <p><b>Phases 2 and 3 (40 ha, 8 subprojects)</b></p> <p>1.2a Identify and formulate eco-district feasibility studies (2019–2020)</p> <p>1.2b Complete infrastructure and architectural detailed design (2020–2021)</p> <p>1.2c Prepare, complete, and implement the VLSP or land acquisition (2019–2025)</p> <p>1.2d Procure goods and works (2021–2022)</p> <p>1.2e Construct and commission infrastructure, social housing units, social facilities, and public space (2021–2023)</p>
---

<p><b>Key Activities with Milestones</b></p> <p>2.2a Shortlist commercial banks (2020–2021)</p> <p>2.2b Select developers (2021)</p> <p>2.2c Construct and commission affordable housing and market housing units, and commercial areas (2021–2025)</p> <p>2.2d Sell housing units and approve subloan mortgages (2021–2026)</p> <p><b>Phases 4 and 5 (50 ha, 10 subprojects)</b></p> <p>1.3a Identify and formulate eco-district feasibility studies (2020–2021)</p> <p>1.3b Complete infrastructure and architectural detailed design (2021–2022)</p> <p>1.3c Prepare, complete, and implement the VLSP or land acquisition (2020–2026)</p> <p>1.3d Procure goods and works (2021–2023)</p> <p>1.3e Construct and commission infrastructure, social housing units, social facilities, and public space (2022–2024)</p> <p>2.3a Shortlist commercial banks (2021–2022)</p> <p>2.3b Select developers (2022)</p> <p>2.3c Construct and commission affordable housing and market housing units, and commercial areas (2022–2026)</p> <p>2.3d Sell housing units and approve subloan mortgages (2022–2026)</p> <p><b>3: Sector policy reforms implemented and capacity strengthened</b></p> <p><b>3.1 Project implementation and management</b></p> <p>3.1a Recruit and train PMO staff (2018)</p> <p>3.1b Hire project implementation and management support consulting services (2018)</p> <p>3.1c Train and increase capacity of PMO staff and targeted institutions (2019–2023)</p> <p>3.1d Prepare, implement, supervise, and monitor VLSP activities (2019–2026)</p> <p><b>3.2 Eco-district feasibility, development, and policy reforms</b></p> <p>3.2a Hire eco-district feasibility, development, and policy reform consulting services (2018)</p> <p>3.2b Implement eco-district planning, green building standard, social and affordable housing, and develop guidelines and regulations (2019–2020)</p> <p>3.2c Complete feasibility study for the five phases of implementation (2019–2021)</p> <p>3.2d Implement policy and sector reforms related to climate change adaptation and mitigation, and improved supply and access to green social and affordable housing (2019–2022)</p> <p><b>3.3 Detailed design and supervision</b></p> <p>3.3a Hire detailed design and supervision consulting services (2018)</p> <p>3.3b Complete detailed design and final voluntary land swapping agreement for each phase: phase 1 (2020), phases 2 and 3 (2021), and phases 4 and 5 (2022)</p> <p>3.3c Supervise construction for each phase: phase 1 (2024), phases 2 and 3 (2025), and phases 4 and 5 (2026)</p> <p><b>3.4. Sustainable green finance</b></p> <p>3.4a Hire sustainable green finance consulting services (2018)</p> <p>3.4b Develop standard, guidelines, and regulations for the use of the EDAF (2019–2020)</p> <p>3.4c Implement policy and sector reforms related to green finance (2019–2021)</p>
<p><b>Inputs</b></p> <p>Asian Development Bank (ordinary capital resources concessional loan): \$20.0 million</p> <p>Asian Development Bank (ordinary capital resources regular loan): \$60.0 million</p> <p>Green Climate Fund: \$50.0 million (grant)</p> <p>Green Climate Fund: \$95.0 million (loan)</p> <p>High-Level Technology Fund: \$3.0 million (grant)</p> <p>Municipality of Ulaanbaatar: \$35.0 million</p> <p>Development Bank of Mongolia/commercial banks: \$111.4 million</p> <p>Developers: \$131.8 million</p> <p>Beneficiaries: \$63.9 million</p>
<p><b>Assumptions for Partner Financing</b></p> <p>Not applicable</p>

EDAF = eco-district and affordable housing fund, ha = hectare, km = kilometer, kWh/m<sup>2</sup>/year = kilowatt hour per square meter per year, m<sup>2</sup> = square meter, MUB = Municipality of Ulaanbaatar, NOSK = Capital City Housing Corporation, PMO = project management office, VLSP = voluntary land swapping plan.

<sup>a</sup> State Great Khural. 2016. *Mongolia Sustainable Development Vision 2030*. Ulaanbaatar.

<sup>b</sup> State Great Khural. 2013. *Priorities 1 and 2 of Adjustments to the Ulaanbaatar City Urban Development Master Plan 2020 and Development Directions 2030*. Ulaanbaatar.

Source: Asian Development Bank.

### **LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=49169-002-3>

1. Loan Agreement: Ordinary Operations
2. Loan Agreement: Ordinary Operations (Concessional)
3. Loan Agreement: ADB Green Climate Fund
4. Grant Agreement: ADB Green Climate Fund
5. Grant Agreement: High-Level Technology Fund
6. Project Agreements
7. Sector Assessment (Summary): Water and Other Urban Infrastructure and Services
8. Project Administration Manual
9. Contribution to the ADB Results Framework
10. Development Coordination
11. Climate Change Assessment
12. Financial Analysis
13. Economic Analysis
14. Country Economic Indicators
15. Summary Poverty Reduction and Social Strategy
16. Social and Gender Action Plan
17. Environmental Assessment and Review Framework
18. Initial Environmental Examination
19. Resettlement Framework
20. Voluntary Land Swapping Plan
21. Risk Assessment and Risk Management Plan

### **Supplementary Documents**

22. Safeguards and Social Dimensions Summary
23. Financial Management Assessments