

Environmental Assessment and Review Framework (Updated)

Project No.: 45007-009
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Mongolia: Ulaanbaatar Urban Services and *Ger* Areas Development Investment Program (Tranche 3)

Prepared by the Municipal Government of Ulaanbaatar for the Asian Development Bank.

CURRENCY EQUIVALENTS

(as of 23 March 2020)

Currency unit	–	togrog (MNT)
MNT1.00	=	\$0.00036
\$1.00	=	MNT2,767.5

WEIGHTS AND MEASURES

dB(A)	-	A-weighted sound pressure level in decibels
ha	-	Hectare
kg	-	Kilogram
km	-	kilometre
kWh	-	kilowatt hours
m	-	Meter
mm	-	Millimetre
m/s	-	meters per second
m ²	-	square meter
m ³	-	cubic meters
mg/l	-	milligrams per litre
mg/m ³	-	milligrams per cubic meter
mg/Nm ³	-	milligrams per standard cubic meter
Nm ³	-	standard cubic meter
0C	-	degrees Celsius

ABBREVIATIONS

ADB	–	Asian Development Bank
AP	–	Affected Person
CDC	–	Community Development Council
DEIA	–	Domestic Detailed Environmental Impact Assessment
EIA	–	Environmental Impact Assessment
EMP	–	Environmental Management Plan
EMR	–	Environmental Monitoring Report
GADIP	–	Ulaanbaatar Urban Services and Ger Areas Development Investment Program
GEIA	–	General Environmental Impact Assessment
GRM	–	Grievance Redress Mechanism
IEE	–	Initial Environmental Examination
LARP	–	Land Acquisition and Resettlement Plan
MFF	–	Multi-tranche Financing Facility
MET	–	Ministry of Environment and Tourism
MUB	–	Municipal of Ulaanbaatar City
NGO	–	Non-Governmental Organization
NO ²	–	Nitrogen Dioxide
PIS	–	Project Implementation Support
PMO	–	Project Management Office
PPTA	–	Project Preparatory Technical Assistance
REA	–	Rapid Environmental Assessment
SO ²	–	Sulphur Dioxide

SOE	–	State-owned enterprise
SPS	–	ADB Safeguard Policy Statement
USUG	–	Ulaanbaatar Water Supply and Sewerage Authority
WHO	–	World Health Organization

NOTES

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

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I. INTRODUCTION

A. Purpose of the Environmental Assessment and Review Framework

1. This updated Environmental Assessment and Review Framework (EARF or “Framework”) has been prepared for the MON: Ulaanbaatar Urban Services and *Ger* Areas Development Investment Program (the Program). The Program will be a ten-year investment in three tranches, aimed at improving the quality and coverage of urban infrastructure and basic services, and implementing a sustainable and inclusive process of urban development for middle *ger* areas of Ulaanbaatar, Mongolia. Multi-tranche financing facility (MFF) is the proposed financing modality for the Program to facilitate a long-term partnership between the Asian Development Bank (ADB), the Government of Mongolia and the Municipality of Ulaanbaatar (MUB). The MFF will provide opportunities for constructive dialogues on city planning, policy reform, and physical and nonphysical investments. It will provide the critical mass, predictability and continuity for urban services and will enable ADB to respond effectively to the needs of MUB by tailoring its assistance.

2. The updated EARF has been developed and agreed with MUB, where outlines the procedures that will be followed in the environmental assessment and review of subprojects that will be prepared after Program approval in order to comply with the environmental safeguard requirements of SPS (2009) of the Asian Development Bank (ADB) and the Law of Mongolia on Environmental Impact Assessment (2012). It is intended for use primarily by the following key players: (i) MUB as the executing agency and the implementing agency of the Program; (ii) Sub-center Redevelopment Authority (SRA); (iii) Ulaanbaatar Water and Sewerage Authority (USUG) as a sub-implementing agency; and (iv) the Program Management Office (PMO).

3. The EARF provisions shall guide MUB in the selection, screening and categorization, environmental assessment, and preparation and implementation of safeguard plans (such as an environmental management plan or EMP) of components and subprojects under the three tranches of the Program. The preparation of environmental assessment documents shall follow the procedures outlined in this EARF. Since the environmental assessment reports and environmental management plans to be prepared for all three tranches are the Borrower's documents, these documents shall be officially endorsed by MUB and submitted to ADB for review, approval and disclosure.

4. The EARF: (i) describes the Program and its tranches; (ii) explains the general anticipated environmental impacts of tranches to be financed under the Program; (iii) specifies the requirements that will be followed related to screening and categorization of all three tranches, assessment, and planning, including meaningful consultation with affected people and other stakeholders and information disclosure requirements; (iv) specifies the environmental safeguard criteria that are to be used in selecting/rejecting subprojects and/or components under each tranche; (v) assesses the adequacy of the borrower's capacity to implement national laws and ADB's requirements and identifies needs for capacity building; (vi) specifies EARF implementation procedures, including the budget, institutional arrangements, and capacity development requirements; (vii) specifies monitoring and reporting requirements, and (viii) describes the responsibilities of the EA and of ADB in relation to the preparation, implementation, and progress review of safeguard documents of all three tranches.

B. Background of the Project

5. Ulaanbaatar peri-urban area (*ger* areas) are characterized by unplanned settlement of low- and medium-income households with un-serviced plots, inadequate and mostly unpaved road networks, and a severe lack of social and economic facilities and basic infrastructure and services for water, sewerage, and heating. Poor sanitation—households almost exclusively rely

on open pit latrines—and poor waste collection have created highly unsanitary living conditions. Air pollution is among the most severe in the world, particularly during winter because of inadequate household heating systems and unpaved roads.

6. The ger area population is estimated at 800,000, representing 60% of Ulaanbaatar or 30% of the country population. Despite their size, ger areas have until recently been considered temporary settlements. TA 7591-MON and PPTA 7970-MON significantly contributed to the official integration of ger areas in the 2013 city master plan by providing the vision and infrastructure programming strategy. This provided the necessary provision to plan the redevelopment of a formal peri-urban area.

7. The MFF program will support the Ulaanbaatar city master plan in upgrading priority service and economic hubs (Subcenters) in ger areas. The program implementation period will be up to 9 years and will comprise three tranches. The program is geographically targeted with multi-sector interventions. It proposes an integrated solution to respond to the urgent demand for basic urban services and establish a network of well-developed urban Subcenters providing economic opportunities, housing, and urban services as catalysts for growth in the ger areas.

8. The program is divided into three projects and has four outputs:

- (i) **Output 1.** Roads and urban services are expanded within the targeted Subcenters and connectivity between Subcenters is improved;
- (ii) **Output 2.** Economic and public services in Subcenters are improved;
- (iii) **Output 3.** Service providers become more efficient;
- (iv) **Output 4.** Institutions and capacity for urban development, program management, and service delivery are strengthened.

9. **The Tranche 1** of the MFF supports the city master plan in developing the Selbe and Bayankhoshuu subcenters. The main proposed components to be financed are:

- (i) construction of sewerage network extension of 6.1 kilometres (km) collector main, sewerage pumping station along with 2.09 km of sewer pipe extension;
- (ii) within the Subcenters, 15 km of priority roads, 18.6 km of water supply, 20 km of sewerage, 21 km of district heating network pipes, and 5 heating facilities;
- (iii) social and economic facilities, including two kindergartens, green areas and small squares, and two business incubators associated with two vocational training centres;
- (iv) multi-interventions in the Ulaanbaatar Water Supply and Sewerage Authority to improve its operations and service delivery efficiency; and
- (v) institutional strengthening and capacity development to prepare detailed design and construction supervision, support community participation and small and medium enterprise development, improve urban planning and Sub-center development, strengthen the capacity of the PMO, and support service providers' reforms.

10. Tranche 2 includes Dambadarjaa and Denjiin 1000 Subcenters and Tranche 3 –Sharkhad and Tolgoit Subcenters as project areas. These tranches will i) expand the coverage of similar investments in Tranche 1 subcenters, as well as in other subcenters located in the northern and eastern parts of the ger areas; and (ii) improve road connection between the targeted subcenters.

11. **Tranche 2** will expand the coverage of similar investments within Dambadarjaa and Denjiin 1000 Subcenters that locate in the northern part of Ulaanbaatar city. Specific investments include construction of (i) 7.08 kilometers (km) of priority roads within the subcenters (together with street lighting, 3 bridges, sidewalks); (ii) 200 meter (m) of flood channel and 7.4 km drainage; (iii) 13.2 km electricity cable overhead line and 7.1 km cable duct for telecommunications network; (iv) 24.1 km of water supply, 25.8 km of wastewater, and 6.0 km of district heating network pipes

and associated equipment; (v) 3 heating plants equipped with circulating fluidized bed combustion boilers to supply Bayankhoshuu, Dambadarjaa, Denjiin, and Selbe subcenters for a total capacity of 112.5 megawatts; and (vi) rehabilitation and expansion of 6.1 km of water supply main and 7.2 km of sewage main; (vii) four kindergarten classrooms in Bayankhoshuu, Dambadarjaa, Denjiin, and Selbe using green building design; (viii) two community development and service centers in Dambadarjaa and Denjiin; (ix) two sports complexes in Bayankhoshuu and Dambadarjaa; (x) two urban parks in Bayankhoshuu and Denjiin; and (xi) two community engagement programs in Bayankhoshuu and Selbe.

12. **Tranche 3** will expand the coverage of similar investments within Sharkhad and Tolgoit Subcenters. Specific investments include construction of (i) 16.62 kilometers (km) of priority roads within the subcenters (including street lighting and 5 bridges); (ii) 10.88 km of flood protection channel and two sediment retention ponds; (iii) 40 km overhead electricity cable and 9.6 km fibre optic cable with auxiliary facilities for telecommunications network; (iv) 10.87 km of water supply, 10.61 km of sewerage pipeline, and 8.02 km of heating network pipes with seven substations and secondary connection; and (v) one reservoir in Sharkhad and one pumping station each for water supply in Sharkhad and Tolgoit; (vi) two kindergartens in Tolgoit and Sharkhad; (vii) one primary health care center in Tolgoit; (viii) two community development and service centers in Tolgoit and Sharkhad; (ix) two business incubators in Tolgoit and Sharkhad; (x) one sports complex in Sharkhad; (xi) four landscaping in Tolgoit and Sharkhad; and (xii) 50 units social housing in Sharkhad.

Policy dialogue and capacity development

13. The policy dialogue and capacity development will focus (i) in communities, on community participation, awareness, and empowerment, including design and implementation of social and gender action plan; and establishment of community development councils (CDCs) and small- and medium-sized enterprise (SME) development councils (SDCs); (ii) in Subcenters, on Sub-center upgrading, including technical guidance for preparing and implementing local development plans, urban zoning regulation and construction standards, and a development framework with a transparent mechanism to regulate land redevelopment insuring current residents are integrated in the redevelopment plan; (iii) in the city, on the master plan through on-going ADB technical assistance to strengthen urban planning capacity,¹ and (iv) in capacity development for water, wastewater, and heating utilities.

Investment and Financing Plans

14. The total cost of the program at appraisal was estimated at \$320 million comprising (i) \$163.7 million from a blend of ADB's ordinary capital resources (OCR), concessional OCR, and Urban Environmental Infrastructure Fund (UEIF); (ii) \$96 million MUB financing or 30% of the total cost, including taxes and duties, resettlement, and other miscellaneous costs; and (iii) \$60.3 million equivalent EIB financing to finance water supply and sanitation components of the program. Each tranche of the MFF is subject to the government's submission of related periodic financing request (PFR), execution and compliance of the related loan and project agreements, and fulfilment of terms and conditions and undertakings set forth in the FFA. The cost of Tranche 1 is \$104.52 million—(i) \$27.50 million OCR loan; (ii) \$22.50 million concessional OCR loan; (iii) \$3.70 million UEIF grant; (iv) \$22.44 million MUB share; and (v) \$28.38 million equivalent EIB share. The cost for Tranche 2 is \$121.14 million—(i) \$37.11 million OCR loan; (ii) \$29.24 million concessional OCR loan; (iii) \$35.15 million MUB share; and (iv) \$19.64 million equivalent EIB share. For Tranche 3, the total investment cost is \$135.40 million. To help finance the project, the

government has requested (i) a concessional loan of \$18.60 million; and (ii) a regular loan of \$27.77 million from ADB's OCR.

Table 1. Investment Program (\$ million) ²

Item	Investment Program (Revised)	Tranche 1	Tranche 2	Tranche 3
A. Base Cost^a				
1. Expanded roads and urban services				
1.1 Roads improvement	79.48	24.59	30.69	24.20
1.2 Water supply, wastewater, and drainage services	57.76	25.70	16.74	15.32
1.3 Heating services	72.79	30.14	32.90	9.75
1.4 Electricity and telecommunication	6.22			6.22
Subtotal (1)	216.25	80.43	80.33	55.49
2. More efficient service providers	3.70	3.70	0.00	0.00
3. Improved economic and public services	39.79	5.00	18.84	15.95
4. Institutional strengthening and capacity development	11.77	4.00	4.29	3.48
Subtotal (A)	271.51	93.13	103.46	74.92
B. Contingencies^b	38.85	7.40	11.06	20.39
C. Financial Charges During Implementation^c	28.61	4.00	6.62	17.99
			121.14	135.40
Total	362.68	104.52^d		

15. The program will be implemented over a period of 9 years from December 2013 to December 2022.

16. **Tranche 1** implementation period started in December 2013 and is progressing satisfactorily, with overall implementation progress of 71.6%. For Tranche 1, out of 17 plant/civil works contracts, 16 have been awarded—only one small works package remains (PP01-SW) for the affordable housing pilot project, which was advertised on 5 November 2019 with construction period of 9 months; 4 plant/works packages (WWOI, BSF05 Lot 1, BSF05 Lot 2, and BHF06) were 100% physically completed.

17. **Tranche 2** is being implemented for 32.3 months from the approval date (53.9% of the overall implementation time). As of 25 November 2019, the overall contract award was at 19.1% (\$12.6 million) for one plant and two consulting service packages; while total disbursement was at 13.3% (\$8.8 million). Two civil works contracts were signed and will be submitted to ADB for approval. One EIB package was advertised on 15 November 2019. Detailed design is on-going and expected to be completed and approved by National Expertise by Q1 2020.

18. **Tranche 3** is in its preparation period with Feasibility Study and concept designs are prepared and submitted to ADB for approval on December 10, 2019. An IEE and EMP prepared for Tranche 3 are submitted to ADB and under review by ADB. Once finalized and approved by ADB, the Tranche 3 IEE/EMP will be disclosed on ADB and MUB websites and relevant information such as anticipated impacts, mitigation measures, and grievance redress mechanism (GRM) were shared with concerned stakeholders including the affected people and local *khoro* administrations.

C. Environmental Categorization

19. All three tranches under the Program have been classified as a Category B for environment, thus requiring an initial environmental examination (IEE). The IEE and

² Source: Asian Development Bank estimates.

environmental management plan (EMP) for Tranches 1 and 2 were approved by ADB, and disclosed on ADB and MUB websites. The EMPs for the previous tranches were included in bid documents and contracts. The same procedures will be applied to Tranche 3. The GRM established for the previous tranches will be applied to Tranche 3.

20. The IEE identified a range of positive impacts and benefits and adverse issues/concerns/impacts from the investment. Benefits include convenient access to houses and properties, and safe/potable water supply, wastewater management services, heating, and social and economic infrastructure. These will lead to positive impacts, such as improved hygiene and sanitation, reduced health risks and incidence of diseases, reduced dust suspension, reduced soil and groundwater contamination, reduced greenhouse gas emission, reduced nasty odour especially during non-winter months, and an improved business and working environment.

21. In compliance with Mongolia's environmental safeguard policy, all three tranches are subject to General Environmental Impact Assessment (GEIA) or environmental screening by the Ministry of Environment and Tourism (MET). The GEIA issued by MET on 2013 concluded that a Detailed Environmental Impact Assessment (DEIA) for each subcenter was required. DEIAs have been undertaken by a MET-registered consulting companies. Tranche 1 DEIA was approved by MET in October 2013 and Tranche 2 DEIA was approved by MET in May 2017. Tranche 3 DEIA is under preparation and expected to be approved by MET in Q1 of 2020. As indicated in the Mongolian environmental regulations and ADB requirements, DEIA and EMP are subject for consideration and compliance, while subprojects construction and operation goes on.

II. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

A. Legal Framework

23. The Tranches, Projects and components pertaining to this EARF are subject to both ADB and National environmental safeguard policies and legislation. This section specifies the ADB requirements and those set out in Mongolian law, which prescribe the principles governing the implementation of all components.

ADB's Safeguard Policy Statement (2009)

24. Environmental safeguards requirements, including environmental impact assessment requirements, are defined in ADB's Safeguard Policy Statement (2009). All projects funded by ADB must comply with SPS 2009 to ensure that projects undertaken as part of programs funded under ADB loans are environmentally sound, are designed to operate in compliance with applicable regulatory requirements, and are not likely to cause significant environmental, health, or safety hazards. With respect to the environment, the SPS 2009 is underpinned by the ADB Operations Manual, Bank Policy (OM Section F1/OP, 2010). The policy promotes international good practice as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines.³

25. **ADB's Environmental Safeguards policy principle** are defined in SPS (2009), Safeguard Requirements 1, as follows:

- (i) Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.
- (ii) Conduct an environmental assessment for each proposed tranche to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential trans boundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.
- (iii) Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative proposed. Also consider the no project alternative.
- (iv) Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare an environmental management plan (EMP) that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.
- (v) Carry out meaningful consultation with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders,

³ New Version of the "World Bank Group Environmental, Health, and Safety Guidelines", April 30, 2007, Washington, USA. <http://www.ifc.org/ifcext/enviro.nsf/Content/EnvironmentalGuidelines>

- including affected people and concerned nongovernment organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment. Establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental performance.
- (vi) Disclose a draft environmental assessment (including the EMP) in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment, and its updates if any, to affected people and other stakeholders.
 - (vii) Implement the EMP and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.
 - (viii) Do not implement project activities in areas of critical habitats, unless (i) there are no measurable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development, and management of renewable natural resources.
 - (ix) Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions, waste generation, and release of hazardous materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phase-outs. Purchase, use, and manage pesticides based on integrated pest management approaches and reduce reliance on synthetic chemical pesticides.
 - (x) Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities.
 - (xi) Conserve physical cultural resources and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.

National Legislation

Relevant Mongolian Government Acts, Rules, Strategies and Guidelines

26. The implementation of various components of Ulaanbaatar Services and Ger Areas Development Investment Program (MFF) will be governed by Government of Mongolia (GoM)

laws and regulations related to environmental considerations. Major Mongolian environmental laws and regulations relevant to the project are listed in **Table 2**.

Table 2. Relevant Environmental Laws in Mongolia

Law	Enacted and Amended	Brief Description
Law on Development Policy Planning	November 2015	Convene public consultation with the affected communities on the scope and impacts of policies, strategies and programs.
Law on Legal Status of the Capital City	Enacted in 1994 and amended in February 2013	Any entities and organizations in the capital city regardless of the type of ownership will be liable for: <ol style="list-style-type: none"> 1. Comply with administrative directives by the municipality and other legislations and keep informed their employees 2. Provide support to the implementation of the capital city specific programs by the municipality 3. Operation and maintenance of private properties (land, buildings, etc.) and surrounding public amenities will comply with requirements and standards
Law on Environmental Protection	Enacted in 1995 and amended in May 2017	To ensure safe environment, have ecologically balanced social and economic development, and for the protection of the environment for present and future generations, the proper use of natural resources and the restoration of available resources". Its Article 7 requires the conduct of natural resource assessment and environmental impact assessment to preserve the natural state of the environment, and Article 10, the conduct of environmental monitoring on the state and changes of the environment.
Law on Environmental Impact Assessment	Enacted in January 1998 and last amended in May 2012.	Regulates "relations concerning protection of the environment, prevention of ecological imbalance, the use of natural resources, assessment of the environmental impact and decision-making on the start of a project". It sets out the general requirements and procedures for project screening and conduct of environmental assessment and review.
Law on Land (revised)	Enacted in 2013 and amended in 2018	Regulates the possession and use of land by a citizen, entity and organization, and other related issues. Articles 42/43 provide guide on removing possessed land and granting of compensation relative to removing.
Law on Soil protection and prevention from desertification	Enacted in 2012 and amended in 2015	Regulates matters related to protection of soil deterioration, exclamation, and prevention from desertification.
Law on Water (revised)	Enacted in 2012 and amended in 2017	Regulates relations pertaining to the effective use, protection and restoration of water resources. Specifies regular monitoring of the levels of water resources, quality and pollution. Provides safeguards against water pollution.
Law on Fees for Water Pollution	Enacted in 2012 and amended in 2017	Regulates determination and registration of water polluters, subject for water pollution fees, operations of urban water supply and sewerage networks, protection of sewerage pipelines and technical requirements for locations of WWTP.
Law on Air (revised)	Enacted in 2012 and amended in 2018	Regulates the protection of the atmosphere to provide environmental balance and for the sake of present and future generations. Allows government to set standard limits to emissions from all sources. Regulates regular monitoring of air pollution, hazardous impacts and changes in small air components such as ozone and hydrogen.
Law on Fees for Air Pollution	Enacted in 2010 and amended in January 2018	Regulates registration of air polluters, physical factors to determine air pollution fees and exemptions.
Law on Hygiene (revised)	Enacted in 2016 and amended in 2017	Governs relationships concerning maintenance of sanitary conditions, defining the general requirements for sanitation in order to ensure the right of an individual to healthy and safe working and living conditions, ensuring normal sanitary conditions, and defining the rights and duties of individuals, economic entities and organizations with this respect.
Law on Waste	Enacted in 2017	Governs the collection, transportation, storage, and depositing in landfills of household and industrial waste, re-using waste as a source of raw materials to eliminate hazardous impacts of household and industrial waste on public health and

Law	Enacted and Amended	Brief Description
		the environment. Undertakings that generate significant amount of wastes must dispose of the wastes in designated landfills that meet prescribed standards.
Law on Toxic and Hazardous Chemicals	Enacted in 2006 and amended in January 2018	Sets out basic requirements for handling of toxic and hazardous chemicals and risk assessment.
Law on Disaster Protection	Enacted in 2003 and amended in 2012 and 2017	Regulates matters relating to the principles and full powers of disaster protection organizations and agencies, their organization and activities, as well as the rights and duties of the State, local authorities, enterprises, entities and individuals in relation to disaster protection.
Law on Re-development of Urban Settlements	Enacted in 2015	Sets out requirements and principles of Urban Planning. Emphasized that the top priority is to represent interest of residents.
Law on Land Privatization	Enacted in 2002 and amended in June 2018	Defines rights and obligations of the landowner, termination and re-possession of the ownership right and conditions for re-settlement.
Law on Land Fees	Enacted in 1997 and amended in 2012	Regulates collection of land use fees by individuals and entities in Mongolia.
Law on Construction	Enacted in 2016 and amended in 2017	Sets out permits and technical requirements for design, construction materials, construction sites and civil works
Law on Sanitation	Enacted in 2011 and amended in 2017	Sets out sanitary requirements to environment, urban planning and construction and work place.
Law on Labour	Enacted in 1999 and amended in 2017	This law aims to ensure equality in labour relations between employees and employers by defining roles, responsibilities and rights of them, work condition and terms of employment.
Law on Labour Safety and Hygiene	Enacted in 2008 and amended in 2018.	This law defines state policy and control on work condition, requirements on occupational health and safety conditions and aims to ensure provision of safe labour condition for employees.
Law on Fire Safety	Enacted in 2015	This regulates affairs regarding fire safety and defines roles of organizations, entities and individuals to ensure fire safety at all places.

International Treaties

27. Mongolia is a party of an international environmental conventions and protocols. It has passes state laws that implement the terms of these international conventions, with provision that: "If an international treaty to which Mongolia is a party is inconsistent with this law then the provisions of the international treaty shall prevail."

28. In recognition of its global responsibilities, Mongolia has acceded to a number of international environmental conventions and the key ones are shown in the following table.

Table 3. Relevant International Environmental Conventions

No	International Conventions signed by Mongolia	Year of Accession
A	Nature conservation	
1	Convention on the Protection of Wetlands of International Importance-Ramsar Convention on Wetlands	1998
2	CITES (Convention on International Trade in Endangered Species of Fauna and Flora)	1996

No	International Conventions signed by Mongolia	Year of Accession
3	CBD (Convention on Biological Diversity)	1993
B	Hazardous material	
1	Stockholm Convention on Persistent Organic Pollutants (POPs)	2004
2	Basel Convention on the Control of Trans-boundary Movement of Hazardous Waste and Their Disposal	1997
3	Rotterdam Convention on Prior Informed Consent (PIC) for certain Hazardous Chemicals and Pesticides in International Trade	2000
C	Atmospheric emissions	
1	UNFCCC (United Nations Framework Convention on Climate Change)	1994
2	Kyoto Protocol	1999
3	UNCCD (United Nations Convention to Combat Desertification)	1996
4	Montreal Protocol (on Ozone Depleting Substances)	1996
5	Vienna Convention for the Protection of the Ozone Layer	1996
D	World Heritage	
1	World Heritage Convention	1990

29. Each of these conventions places obligations on signatory governments ranging from the provision of a legislative basis for implementation, to adhere to requirements and conditions of each convention, to monitor implementation performance on a regular basis, to report on a regular basis to the conference of parties.

30. A further indication of the global significance of the Mongolian environment is the fact that 11 sites in Mongolia have been declared as wetlands of international importance under the Ramsar Convention, making a total of almost 1.5 million hectares.

31. The Program site do not fall under the jurisdiction of any of the protected or sensitive or special areas in Mongolia.

Environmental, health and safety Standards

32. At present there are so-called “Mongolian National Standards”- MNS in effect in Mongolia. The standards prescribe effluent/wastewater standard, ambient air, noise, water quality, soil quality, industrial effluent discharge, boiler emission etc.

33. Key standards applied for this project include the following: (i) Water quality general requirement (MNS 4586:1998); (ii) Air quality. General technical requirements (MNS 4585:2016); (iii) Drinking water. Hygiene requirements, evaluation of quality and safety (MNS 0900:2018), (iv) Waste water quality supplied to sanitation network (MNS 6561-2015), (v) Determining disposal location of waste water (MNS 6230-2010), (vi) Occupational hygiene and work condition (MNS 4990-2015), (vii) General Requirements on personal protective equipment (MNS 4931-2000), (viii) General requirement on fire safety (MNS 4244-1994), (ix) General requirement on transportation of domestic waste (MNS 5344-2011), (x) Planning of public utility facilities and distance from green areas (MNS 5973-2009), (xi) General requirement for parking space (MNS 5342-2007) and the WHO Guidelines for Drinking-water Quality, Fourth Edition (2011); (xii) Soil Quality, Soil Pollutant Elements and Substances Standard (MNS 5850:2008); (xiii) Ambient Noise

Standard (MNS 4585:2016); and (xiv) Labour safety and hygiene. General requirement for noise level and occupational safety (MNS 5002:2000). The standards for air, water, noise and soils pollution as per Mongolian Standard are listed in **Appendix section** for reference.

34. Occupational health and safety standard (MNS 5002:2000). Article 16 of the National Constitution of Mongolia states that every employee has the right to 'suitable conditions of work'. The government adopted a National Program for Occupational Safety and Health Improvement in 2001 and national standards are also adopted such as the National Standard on Occupational Health and Safety MNS 5002:2000 which support the Occupational Safety and Health Law 2008 which sets out policies, rules and regulations on occupational safety and health, and the most common requirements for workplace safety.

Standards, guidelines and good practice in ADB SPS

35. The ADB SPS policy Statement 2009 (SPS) states, "During the design, construction, and operation of the project the borrower/client will apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines. These standards contain performance levels and measures that are normally acceptable and applicable to projects."

36. For this purpose, IFC EHS guidelines are recommended. The *Environmental, Health, and Safety (EHS) General Guidelines*¹ (April 30, 2007) will be applicable for this Project.

37. National regulations take precedence; but when they differ from the EHS Guidelines, the more stringent levels or measures apply. In some circumstances, less stringent levels or measures may be appropriate due to specific project conditions (e.g. existing facilities). In these cases, the borrower/client is required to prepare alternatives that are consistent with SPS requirements for the protection of human health and the environment. Full and detailed justification of the proposed alternatives should also be provided.

B. Environmental Assessment Requirements of Mongolia

38. The environmental impact assessment (EIA) requirements of Mongolia are regulated by the Law on Environmental Impact Assessment (1998, revised in 2012). The terms of the law apply to all new projects, as well as rehabilitation and expansion of existing industrial, service, or construction activities and projects that use natural resources. The purpose of the law is environmental protection, the prevention of ecological imbalance, the regulation of natural resource use, and the assessment of environmental impacts of projects and procedures for decision-making regarding the implementation of projects. The EIA process in Mongolia is summarized in Figure 1.

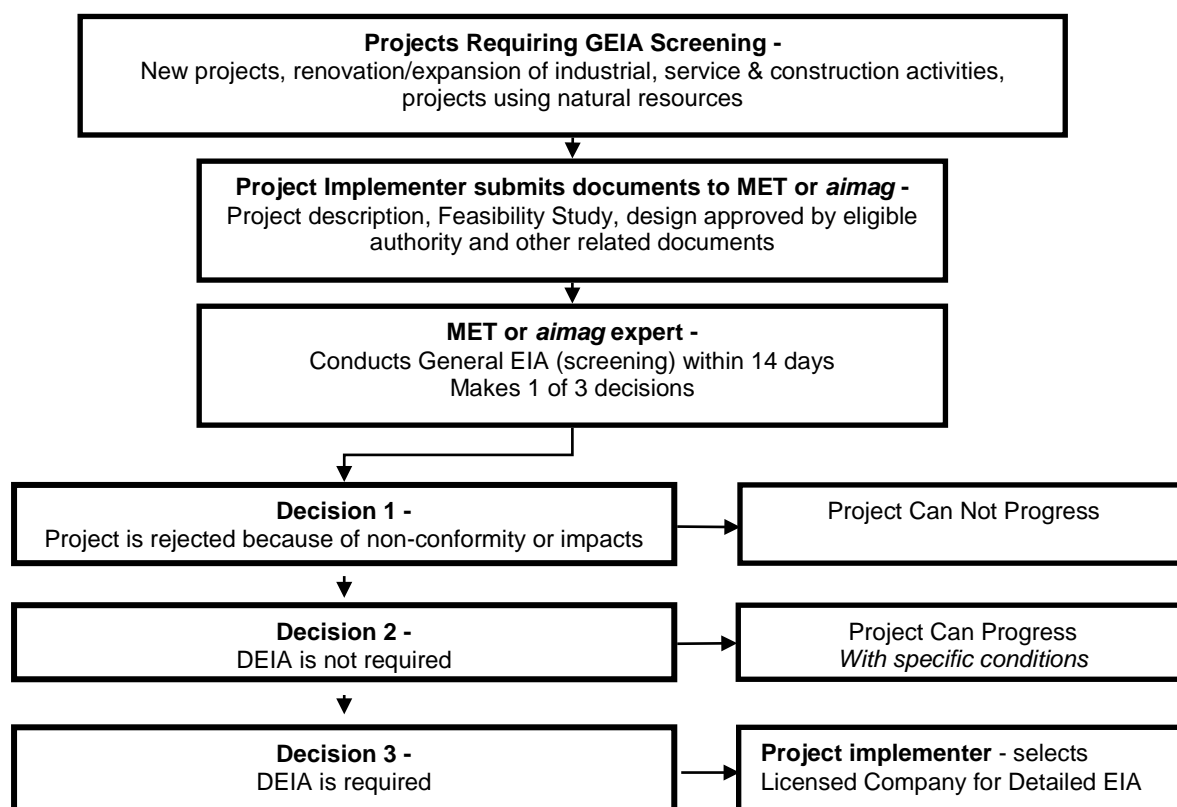
39. There are two types of EIAs defined under the Law on Environmental Impact Assessment (2012), as follows.

- (i) General EIA (GEIA). To initiate a GEIA, the project proponent submits to the MET or *aimag* government a brief description of the project, including feasibility study, technical details, drawings, baseline description of the project environment, and a written opinion of the *soum* governor. These documents form the basis of the GEIA and MET's assessment, which will have one of three conclusions: (a) project is rejected due to non-conformity with national laws and/or the severity of impacts;

- (b) project may proceed, subject to specific conditions, and (iii) a detailed EIA (DEIA) is necessary. Assessment by MET generally takes 14 working days.
- (ii) Detailed EIA. The scope of the DEIA is defined in MET's response for the GEIA. The DEIA is prepared by an accredited national entity. The DEIA is submitted by the project proponent to MET and *aimag* government. The reviewer(s) of the GEIA also review the DEIA, generally within 18 working days, and present the findings to the MET. Based on the content of the DEIA, reviewer conclusions, and any additional comments by MET departments, MET issues a decision on whether to approve or reject the project.

40. The DEIA procedure guide lined by the method approved by the Minister's order A-117 of MET in April 2014 and it is required to contain the following chapters: (i) environmental baseline data; (ii) analysis of extent and distribution of adverse impacts; (iii) measures to minimize, mitigate, and/or avoid impacts; (iv) alternative methods and technology; (v) risk assessment; (vi) environmental management plan (EMP); and (vii) stakeholder consultations, including potentially affected communities.

Figure 1. Environmental Impact Assessment Process in Mongolia



41. In compliance with Mongolia's environmental safeguard policy, all three tranches are subject to General Environmental Impact Assessment (GEIA) - or environmental screening. The Ministry of Environment and Tourism (MET) has issued GEIA's for all three tranches in i). March 2013 for Tranche 1; ii). July 2016 for Tranche 2; and iii). October 2019 for Tranche 3. The GEIA

conclusion has required the preparation of a Detailed EIA (DEIA) for all three tranches, respectively.

42. The conclusion is featured as **Annex 3**. Broadly, the GEIA conclusion has stipulated the following:

- a. items to be included in the DEIA report;
- b. engagement of a MET-registered entity to conduct/prepare the DEIA;
- c. investigations to be conducted relative to issues concerning, identification of impacts of Subproject activity on, definition of mitigation measures and costs to monitor the quality of and impact on --- ground- and surface water, soil, air, weather, forest plant and animals;
- d. determination of the concentration of wastewater generated, monitoring and associated costs;
- e. development of EMP and EPP;
- f. identification of potential impacts on physical cultural resources, recommend management measures for affected ones and obtaining conclusion from a professional organization on this matter;
- g. assessment of potential risks due to natural hazards and defining of mitigation measures;
- h. documentation of public consultations;
- i. risk assessment of hazardous materials used in the Subproject activity according to the new procedures and rules developed in 2013, and recommendations for their safe storage, use and transport; and
- j. submission of DEIA to MET for review and approval.

42. The DEIAs for all three tranches are prepared by a MET-registered/licensed entities based on the Feasibility Study reports. Tranche 1 DEIA was approved by MET in October 2013 and Tranche 2 DEIA was approved in May 2017. Tranche 3 DEIA is under preparation and is expected to be approved by MET in Q1 of 2020. According to the domestic Law on EIA, if project design and technical specifications change, then the detailed EIA has to be updated to reflect the changes in project design.

43. As specified in the “Regulation on Preparation, Review, Approval and Reporting of EMP” which was adopted with the Minister’s order A-05 in January 2014, the Project is required to submit i). an annual EMP (an EMP required by the Mongolian legislation) to the MET every year; and ii). an EMP Performance Report to the Environmental Department of MUB within 01 November of every year.

44. A summary of government environmental compliance requirements applicable to the project is presented in Table 4 below.

Table 4. Summary of Environmental Compliance Requirements for EARF Consideration

Permissions and documents required for the Project	Responsible Agency
Project preparation phase	
Land ownership documents: land certificate, land use agreement and cadastral map	Land management division of related district
Feasibility Study & conceptual design drawing	Developed by project preparation consultants engaged by MUB, approved by USUG, Heat Distribution Network SOE, Power Distribution Network SOE, Road Department of MUB
Initial Environmental Examination and EMP (ADB standard)	Prepared by international and national environment consultants
Climate Change assessment	Development by international environment consultant
Public Consultations	Organized by PMO/MUB in conjunction with project preparation consultants and local khoroo authorities
Social and gender survey	Prepared by international and national social consultants
Land acquisition and resettlement plan (LARP)	Prepared by international and national resettlement consultants
General Environmental Impact Assessment	Issued by the Ministry of Environment and Tourism.
Design development phase	
Develop detailed design (blue print)	A professional licensed firm will be selected by MUB to develop the detailed design
Geo-technical survey (engineer-geological survey)	A professional licensed firm will be selected by MUB to execute the survey
Expertise conclusion on the detailed design of the social buildings	Construction Development Center (an agency under the Ministry of Construction)
Approval of DEIA reports	Professional EIA Committee of MET
Pre-construction phase	
Heating supply technical specification	Issued by Heating Distribution Network SOE
Electrical technical specifications	Issued by Power Distribution Network SOE
Water supply and waste water technical specifications	Issues by USUG – Water Supply Network Administration Agency (A Government Agency)
Determined location of construction waste disposal point	Relevant district authorities
Solid waste removal agreement with local service entities	Every district has an urban service agency (state-owned) who offer contractual services on removal and demolishing of solid waste generated by each entity in their respective district.
Permission for construction of a new buildings	Granted by Master Planning Agency of MUB
Permission to start of construction works	By MUB. Contractor will prepare site specific Construction EMP (SEMP), occupational health and safety risk assessment and plans and develop emergency response plan which will be approved by PMO.
Construction phase	
Monthly construction progress reports	Civil works contractors
Environmental monitoring report (annually)	PMO

Permissions and documents required for the Project	Responsible Agency
Periodic inspection of construction work	General Agency for Specialized Inspection (A government institute)
Fire Safety certificate	General Agency for Emergency (A government institute)
Acceptance Letter for the newly constructed buildings	State Committee comprises of General Agency for Specialized Inspection and MUB staffs
Operation phase	
Fire Safety plan for building evacuation in case of fire.	National Emergency Management Agency (A government institute)
Solid waste management plan	Developed and implemented by operational entities, supervised by General Agency of Specialized Inspection
Operation and Maintenance Plan for infrastructures facilities	Developed and implemented by USUG, Heat Distribution Network SOE, Power Distribution Network SOE, Road Department of MUB
Removal and handling of health care waste	Element LLC – the only HCW handling entity in Mongolia granted license by MOH

*SOE – State Owned Enterprise

C. Institutional Capacity

45. The EARF specifies the roles and responsibilities of institutions (including the Municipality of Ulaanbaatar (MUB), the program management office (PMO), project units, contractors, and environment consultants) in overall environmental management.

46. The MUB as executing agency has the overall responsibility for compliance with EARF, IEEs, and EMPs. The PMO will handle day-to-day activities under the program. The PMO will ensure compliance with assurances, including preparation, finalization, and implementation of the EMP for each tranche. It will be staffed with at least one environmental safeguard staff (an environmental engineer/scientist).

47. The PMO environmental safeguard staff will be responsible for coordination and supervision of the implementation of the EARF and EMP, including (but not limited to)

- (i) updating IEE and EMP after detailed project design is finalized;
- (ii) overseeing incorporation of EMP recommendations into the bidding documents;
- (iii) ensuring the procurement of environmentally responsible contractors;
- (iv) ensuring that DEIA approval by MET has been secured prior to the awarding of civil works contract;
- (v) setting up baseline ambient air quality, noise and vibration levels, ground- and surface water quality and baseline in concerned *khoroos* for tranches 1, 2, and 3;
- (vi) setting up, coordinating, and reporting on the grievance redress mechanism (GRM, see below);
- (vii) monitoring contractors to ensure adherence to the EMP and the contractor EMPs;
- (viii) preparing monthly reports on project EMP implementation to the PMO;
- (ix) coordinating consultation with local stakeholders as required, informing them of imminent construction works, updating them on the latest project development activities, GRM, etc.;

- (x) supporting the environment consultants in conducting training, EMP compliance reviews, annual reporting, etc.; and
- (xi) coordinating the preparation of IEEs, including EMPs, for the three tranches.

48. Contractors will be required to formulate contractor EMPs with complete management systems for adverse impacts, e.g., dust control, noise control, traffic management, addressing as minimum the requirements of the EMP. The contractor EMPs will be reviewed and cleared by the PMO, and by the MET if necessary. To ensure that the contractors comply with the EMP provisions, the PMO will prepare and provide the following specification clauses for incorporation into the bidding procedures: (i) a list of environmental management requirements to be budgeted by the bidders in their proposals; (ii) environmental clauses for contractual terms and conditions; and (iii) the full EMP and DEIAs in both languages.

Figure 2. Implementing Organizational Structure for Environmental Management Plan ⁴



49. In compliance with the agreed upon procurement plan, the PMO will procure the services of environment consultants to provide support in (i) project preparation including updating the EMP; (ii) training; (iii) quarterly environmental quality monitoring (air, surface and ground water, and noise); (iv) annual project EMP implementation reporting; (v) identifying environment-related implementation issues and necessary corrective actions; and (vi) undertaking site visits as required.

⁴ SOURCE: Facility Administration Manual.

III. ANTICIPATED ENVIRONMENTAL IMPACTS

50. The Program targets sustainable urban development of *ger* area Subcenters in Ulaanbaatar, and will tentatively support the: (i) construction of water supply, sewerage and heat supply systems; (ii) improvement of roads, sidewalks, park, street lighting and bus stations; and (iii) construction of buildings for economic and social activities such as parking space, market place, sport and cultural center, covered rental/commercial space for business. Such civil works will generate adverse impacts during construction and operation. When site or right-of-way acquisition will be required, displacement of people and/or loss of assets or economic displacement will be the salient impact prior to construction.

51. The potential impacts, issues and concerns from proposed activities under the Program are presented in **Table 6**.

52. The actual magnitudes of impacts **during construction** will vary depending on, but not limited to, the following: (i) scale and intensity of activities; (ii) location and sensitiveness of the environment; (iii) implementation schedule of components, whether spread out/staggered over a longer, or concentrated in a shorter, period of time; (iv) time of the year when construction is undertaken; and (v) construction method and practices that will be applied. The few significant impacts are expected to be temporary, short-term (i.e., most likely to occur only during peak construction period) and will not be sufficient to threaten or weaken the surrounding resources. All adverse impacts during construction can be easily prevented and mitigated by measures integral to good engineering and construction practices.

53. The magnitudes of adverse impacts **during operation** will depend on the degree of environmental considerations during planning and design, the quality of construction, capacity of the operator to implement the EMP during operation, and sufficient budget for operation and maintenance.

54. The operation of subprojects under the Program will reap positive benefits that will far outweigh the negative impacts. There will be opportunities for local employment and increased earnings of local enterprises during construction. When completed and operational, the subprojects are expected to bring about socio-economic development of existing urban Subcenters and urban corridors, and as such transform the *ger* areas into liveable, productive and well-functioning peri-urban areas for overall improved living conditions in Ulaanbaatar.

Table 5. Potential Environmental Impacts, Issues, Concerns

Design Phase

Involuntary resettlement and economic displacement

- Site or right-of-way acquisition will incur losses & displacements.
- Potential social conflicts/tensions over tenure issues, land acquisition, and economic displacement.

Inadequate design

- Inadequate consideration of drainage crossings, existing utility infrastructure in site, seismicity and relevant suggestions/feedback from stakeholder consultations in planning and design would render the completed works unable to cope with environmental and socio-economic impacts.
- Encroachment on historical/cultural areas and legally protected sites
- Selection of inadequate technologies and appliances with poor energy- and resources efficiency, not complying with fundamental resource efficiency, pollution prevention and abatement principles

Environmental Clearances

- Necessary consents and permits are required (Table 5) in order to implement the project, if not pursued on time, this can delay the project. Necessary environmental clearance and permits have to be obtained and must follow the guidelines issued by authorities.

During construction

Impacts on the sustainability of urban services

- Meeting potable and non-potable water needs during construction with water supply available in the sites will impact on the existing level of service to consumers.
- Construction generated sewage, wastewater & solid waste, given the limited public sanitation facilities in the *ger* areas.
- Accidental damage to power and water supply poles will cause disruption of services.

Water resources problems

- Depletion. Construction demand for water will be significant. If this will be met using piped water supply, the sustainability of existing level of service to consumers will most likely be affected. If groundwater resources could be tapped and would be tapped, depletion of levels in existing groundwater wells will likely occur.
- Deterioration of quality. Groundwater resources, particularly water in open wells, if any, in the immediate vicinities will be exposed to potential contamination by excavated materials, solid wastes, sewage/ wastewater, &/or spilled hazardous & toxic substances& wastes.

Air pollution due to dust and gas emissions

- Fugitive dust from construction will come from dry disturbed/exposed surfaces; movement of construction-associated vehicles and equipment; loading, unloading and stockpile of aggregate materials; quarrying and rock crushing.
- Gas will be emitted from equipment operation, particularly those that are diesel-fed and/or are poorly maintained; burning of wastes; asphalt processing.

Noise and vibration

- Movement and operation of equipment and construction activities and processes will generate noise and vibration.

Traffic safety and road/access blocking

- Construction trucks that transport construction materials to the construction sites might cause traffic safety concern for local residents, particularly for pedestrians and children.
- Main roads are generally of 2 lanes, one lane each way. Inner roads are narrower. Increased traffic and road and access blocking will be inevitable from activities involving horizontal construction.

Local flooding impoundment during rains

- Local impoundment will be likely during heavy rains in areas where mounds of excavated soils and stockpiles of aggregate materials and construction wastes will impede surface runoff. However, the duration of impoundment is initially assumed to be short, considering the permeable character of the soil.

Impact on community health and safety

- Affected communities will be exposed to health & safety hazards from emissions; poorly managed wastes; traffic; haphazard movement of construction vehicles/equipment; access blocking; disruption of urban services particularly solid waste collection, water supply and heating; potential disasters caused by accidental spills of hazardous substances and wastes, fire, explosion, excavation slide/collapse; and potential entry of transmittable diseases to the communities brought by the construction workers.

Impact on workers' health and safety

- Construction workers will be directly and indirectly exposed to crosscutting threats from impacts on air quality; high levels of noise and vibration from the operation of equipment; inadequate supply of safe potable water in construction sites; inadequate sanitation facilities; poor housing conditions; haphazard vehicular movements; open pits; poorly managed construction wastes and hazardous substances; communicable and transmittable diseases in the community and in the workforce; potential fire and explosion; potential collapse of any structure being built; and exposure to extreme weather, among others.

Damages to/losses of physical cultural resources

- This impact is assessed to be minimal. However, prior coordination with relevant authorities will be necessary regarding possible chance find of physical cultural resources, as there have been rare incidents of reported chance finds in Ulaanbaatar in the past.

Clean Up Operations, restoration and rehabilitation

- Impacts on social or sensitive receptors when post-construction requirements are not undertaken, e.g. proper closure of camp, disposal of solid waste, and restoration of land after project construction.

During operation

Water supply, sewerage, and heat supply subprojects

- Unsustainable urban service delivery due to inadequate incorporation of climate change induced hazards and risks during planning and design; insufficient budget for operation and maintenance, deferred maintenance and repair.

- Risk of delivering unsafe water with deferred repairs of leaks.
- Risk of pollution of source of water due to inadequate protection of wells
- Non-sustainability of supply due to inadequate study of the capacity of the resource, and lack of water conservation measures (such as non-revenue water management, water metering and consumption-based billing, and the use of water-saving appliances)
- Degradation of surface water and groundwater due to improper treatment and disposal of collected wastewater and solid waste.
- Impairment of downstream water quality due to inadequate sewage treatment or release of untreated sewage
- Overflows and flooding of neighbouring properties with raw sewage
- Environmental pollution due to inadequate sludge disposal
- Dust from pulverisers, choppers etc. due to fuel washing and preparation
- Stack and exhaust pipe emissions due to fuel combustion. The amount and nature of air emissions depends on factors such as type of coal, the type and design of the combustion unit, operating practices, emission control measures and the overall system efficiency.
- Air pollution and excessive greenhouse gas emissions due to poor performance of heating sources associated to project heat supply networks.
- Community safety risks due to accidental hazards and malfunctioning of subprojects.
- Generation of health care waste from the PHC in Tolgoit subcenter (Tranche 3).

IV. ENVIRONMENTAL ASSESSMENT FOR ALL THREE TRANCHES AND SUBPROJECTS

A. Environmental Criteria for Subproject Selection

55. Proposed subprojects under all three tranches must be in line with the approved road map of the investment program. For environmental safeguarding purposes, the environmental criteria defined in **Table 6** shall be applied when selecting subprojects and/or components to be invested under the three tranches of the Program.

Table 6. Environmental Criteria for Subproject Selection

<p>A. Subprojects that meet any one of the following criteria shall be <u>excluded</u> from the Program:</p> <p>All subprojects/activities that will:</p> <ul style="list-style-type: none"> - encroach, or be sited within, the core and buffer zones of state special protected areas (i.e., strictly protected areas, national parks, national reserves and monuments); - encroach, or be sited within, local special protected areas (which could be natural zones, unique formations, historic and cultural monument/sites, and scenic areas); - be sited in the vicinity of/close to/adjacent to local special protected areas and will likely cause damage to, or loss of, these areas; - likely not conform to national environment-related legislations, to both national and ADB-acceptable standards for environmental quality, and to relevant international environmental conventions to which Mongolia is a party; (see ii of this EARF) - likely cause impacts that are irreversible, or cannot be mitigated to acceptable levels; and - involve any one of the ten activities in the ADB Prohibited Investment Activities List (see Annex 4 which is extracted from Appendix 5 of the Safeguard Policy Statement, June 2009).
<p>B. Subprojects that will be planned and implemented under the Program shall meet the following criteria:</p> <p>General:</p> <ul style="list-style-type: none"> - Subprojects must have environmental, public health or safety benefits. - Minimal involuntary resettlement will be involved. If unavoidable, subproject can, without difficulty, explore design/technology alternatives to reduce the size of required land or select another alignment/site to reduce the number of persons that will be affected.¹

- No indigenous people/community will be directly or indirectly affected. If unavoidable, subproject can, without difficulty, explore design/technology alternatives or selecting another alignment/site to reduce the magnitude of impact on indigenous people.¹

Water supply subprojects:

- Planned storage facilities and/or pumping stations will be in sites that: (i) have good access to trunk infrastructures, particularly stable power supply and road, for sustainable operation and maintenance; and (ii) are not vulnerable to landslide, flooding and other natural hazards.
- Water supply components shall include measures to conserve water and reduce average per capita water consumption through programs and actions such as non-revenue water management, water recycling and reuse, installation of water meters and water conservation appliances (especially in social and commercial infrastructure financed by the project), and/or awareness raising activities.

Wastewater management subprojects:

- Planned sewer networks will serve *ger* areas and will avoid discharge of untreated wastewater to surface water or soil.
- Planned pumping stations will be in sites that: (i) are at least 50 m from existing human settlement; and at least 100 m from existing sensitive institutions, e.g., hospitals/health care institutions, schools, temples/churches; (ii) are not in unsafe distance upstream of water storage facilities; (iii) have good access to trunk infrastructure for sustainable operation and maintenance, e.g., access road, power supply, water supply; and (iv) are not vulnerable to landslide, flooding and other natural hazards.

Heat supply subprojects:

- Proposed components/subprojects will reduce energy consumption by 25% (as compared to individual stoves used for heating in the *ger* area);
- Heat sources will apply best available coal-fired boiler technology or better (in terms of SO_x, NO₂ and PM emissions), and will ensure compliance with most stringent air emission standards (as defined in MNS 6298:2011);
- Heat supply pipes will be insulated to minimized heat loss.
- Project facilities (especially social and commercial infrastructure) will ensure high energy-efficiency and low heat-loss through adequate insulation of walls and roofs.

¹ If this criterion contradicts with any one or more subproject selection criterion/criteria under the Resettlement Framework or Indigenous Peoples Planning Framework, the criterion/criteria of the Resettlement Framework or Indigenous Peoples Planning Framework shall prevail.

B. Procedure for Environmental Assessment and Review under the Program

56. The Program will be implemented over a ten-year period from 2013–2023 in three tranches. For all three tranches of the Program, IEE reports adherent to the ADB safeguard policy have been prepared. In compliance with GOM environmental safeguard requirements, all three tranches have undergone environmental screening or GEIA. The environmental assessment and review procedure described in this section and illustrated in Figure 1 applies to all three tranches to ensure that the environmental safeguard requirements of both the ADB and the GOM are complied with.⁵

⁵ When Mongolian regulations differ from the levels and measures prescribed in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines, MUB will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, MUB will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in this document.

- (i) ADB procedure: (a) environmental categorization, assessment, review and approval is required for each tranche; (b) IEE/EMPs must be reviewed, approved and disclosed by ADB prior to approval of each tranche; and
- (ii) GoM procedure: (a) each tranche must undergo GEIA by the MET prior to implementation; and (b) if GEIA conclusion warrants a DEIA, a DEIA report shall be submitted to, and reviewed and approved by, the MET prior to implementation.

57. Environmental assessment for each tranche will be undertaken during their respective feasibility study stages. MUB as the executing and implementing agency has the overall responsibility for environmental assessment of all three tranches.

58. For purposes of a common understanding, clarification of the following terms is necessary: (i) Program refers to the MFF investment program and consists of tranches; (ii) a tranche consists of components; (iii) a component consists of subprojects; and (iv) a subproject consists of activities in a Subcenters

STEP 1: Screening and Categorization

59. **Asia Development Bank categorization.** Screening is undertaken to determine the environment safeguard category of a tranche and the appropriate extent and type of environmental assessment to conduct. The category of a tranche will be based on the most environmentally sensitive subproject, which will in turn be based on its most environmentally sensitive activity. Hence, each proposed activity is screened as to its type, location, scale and sensitivity and magnitude of its potential environmental impacts; and may be assigned to any of the following categories:

- (i) **Category A**, if proposed activity is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented; and that may affect an area larger than the sites or facilities subject to physical works.
- (ii) **Category B**, if the potential adverse impacts of a proposed activity are less adverse than those of Category A projects. Impacts are site-specific; and few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for Category A projects.
- (iii) **Category C**, if proposed activity is likely to have minimal or no adverse environmental impacts. Such activities still require a short report (or a section in the EIA or IEE prepared for each tranche) justifying their classification and why no impacts are predicted.

60. Screening shall be carried out at the early stage of tranche preparation, as soon as sufficient information on the component subprojects and their activities are available, using the rapid environmental assessment (REA) checklist in **Appendix 10**. A REA Checklist shall be completed for each component of a tranche, but must consider each subproject and its activities. Screening and categorization shall be carried out by the MUB, through its PMO environmental Officer. The REA checklists shall be completed based on project site visits, discussions with local environmental protection authorities and other relevant stakeholders. If ADB implementation assistance teams would be granted or national consulting entities would be engaged for the preparations of the tranches 1,2 and 3, environmental specialists will be at hand to support the

PMO environmental safeguard staff in the screening and categorization. ADB's RSES will confirm and approve the categories of future tranches based on completed REA Checklists.

61. All three projects (Tranche 1, 2 and 3) have been classified as Category B for environment.

62. **Categorization by MET.** Each tranche/project will also undergo environmental assessment following the process prescribed in the Law on Environmental Impact Assessment (as described in Section II of this Framework, paras. 36-40). As soon as sufficient information on the tranche and its components, subprojects and activities are available, GEIA by MET will be applied for by the MUB (through the PMO). Based on the Law on EIA, the following documents will be required for screening (GEIA): (i) project description; (ii) approved or authorized as final technical and economic feasibility study; (iii) working drawings; and (iv) other relevant documents. The PMO will inform ADB on the classification by MET.

STEP 2: Scoping and Field Work Preparation

63. **Scoping.** Before conducting the environmental assessment involving category A or B projects, a scoping exercise is recommended. The PMO shall liaise with ADB's Regional Department to determine the specific requirements for environmental assessment of each tranche. The scoping exercise shall define the project's area of influence, i.e. the geographic boundary to be used to define impacts, potentially affected people, and mitigation measures, monitoring tasks, the scope of public consultation and the eligibility range of the Grievance Redress Mechanism (GRM). In Mongolia, scoping is usually undertaken as part of the GEIA according to National legislation.

64. **Terms of reference and selection of licensed institute for DEIA.** With the screening and scoping completed, yielding a project classification and boundary of impacts, the planning of the field program is the next important task. The selection of the right institute or individual specialists to conduct the environmental assessment and prepare the EIA/IEE report is of utmost importance. MUB will draft and share with ADB's regional department (EARD) the TOR for the environmental assessment, and seek ADB's approval prior to engaging an EIA institute or individual consultants. MUB will use qualified and experienced experts to prepare the environmental assessment and the EMP (**Appendix 11**).

STEP 3: Environmental Assessment

65. The MUB, through its PMO safeguard staff, will be responsible for the environmental assessment of Tranche 3. Environmental specialists from the project implementation support will be at hand to support the PMO in conducting of the appropriate environmental assessments.

66. Depending on the project categorization approved by ADB, either an EIA (for category A) or an IEE (for category B) shall be prepared by the appointed institute or individual consultants on behalf of MUB for each tranche. The EIA/IEE shall be conducted for the entire tranche. The EIA/IEE shall be undertaken during, and a draft EIA/IEE Report shall be delivered at the end of, the feasibility study stage.

67. The EIA/IEE report shall be prepared in consistent with: (i) ADB's SPS 2009; and (ii) the National Law on EIA. A more detailed outline of an EIA/IEE report including scope of work for the environmental assessment is presented in **Appendix 11 and Appendix 12** of this EARF. Key steps of the environment assessment process are described in Table 7. The IEE report prepared for the first tranche of the MFF shall be used as guidance (available from www.adb.org).

Table 7. Key Steps of the Environmental Assessment Process (STEP 3)

<p>STEP 3.1: Review of environment performance of preceding tranches</p> <p>The environment assessment shall start with a critical and comprehensive review of the environmental performance of preceding tranches. MUB, with the support of environment specialists, shall assess compliance with mitigation measures and monitoring plans defined in the EMP, identify weaknesses in EMP implementation, suggest corrective actions for the concerning tranche, and incorporate in the present environment assessment, if applicable. The environmental performance of preceding tranches shall be documented in the IEE/EIA.</p>
<p>STEP 3.2: Definition of baseline conditions</p> <p>The baseline conditions for environmental media likely to be affected by the project components must be established through review of existing information, site visits, stakeholder consultation, and the collection of any available and relevant databases, such as topography, soils, geology, protected areas, sensitive areas and receptors, land use, and all ambient air, noise and water quality conditions in the project's area of influence. For category A project components, baseline data will be collected in the framework of DEIA, usually by the licensed EIA institute or by MET Central Lab. Monitoring locations should be selected at representative sensitive targets identified in the site visit. Routine monitoring data from the local environmental monitoring station can be used as a substitute. However, such data must be collected from locations relevant to the Program and must have been collected less than 12 months ago.</p>
<p>STEP 3.3: Prediction of environmental impacts</p> <p>This step involves predicting environmental risks and anticipated impacts as a result of major construction activities and operation of the tranche's components, subprojects and activities. The assessment must cover potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence.</p>
<p>STEP 3.4: Consultation and participation, GRM and information dissemination</p> <p>Carry out meaningful consultation with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders, including affected people and concerned nongovernment organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment. Establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental performance. This step also includes the definition of a project level grievance redress mechanism (GRM). More details on public consultation and information dissemination/disclosure are provided in Section V.</p>
<p>STEP 3.5: Preparation of environmental management plan (EMP)</p> <p>Prepare an environmental management plan that addresses the potential impacts and risks identified by the environmental assessment. The EMP must include (i) the proposed mitigation measures, (ii) environmental monitoring and reporting requirements, (iii) emergency response procedures, (iv) institutional or organizational arrangements, and (iv) additional capacity development and training measures if needed. The EMP must define implementation schedule, costs estimates, and performance indicators and targets for all mitigation measures that can be tracked over defined periods.</p>
<p>STEP 3.6: Define residual project risks and required project assurances</p> <p>The EIA/IEE and EMP should define residual project risks and required assurances on the environmental aspects of the project. These assurances will be translated into covenants in the legal agreement.</p>
<p>STEP 3.7: Submit draft EIA/IEE report to ADB.</p> <p>The draft IEE/EIA report (in English) must be submitted to ADB for approval, prior to ADB's approval of the periodic financing request (see STEP 4 below).</p>

68. If GEIA conclusion by MET warrants a DEIA, in order to ensure a harmonized compliance with GoM and ADB environmental safeguard requirements, it shall be a policy under the Program for the DEIA to:

- (i) follow the outline prescribed in the National Law on EIA and DEIA Methodology; but
- (ii) be based on the draft ADB EIA/IEE and its EMP; and

- (iii) be conducted by a MET-registered environmental consulting firm that has sufficient experience in conducting environmental assessment of projects funded by international financing institutions.

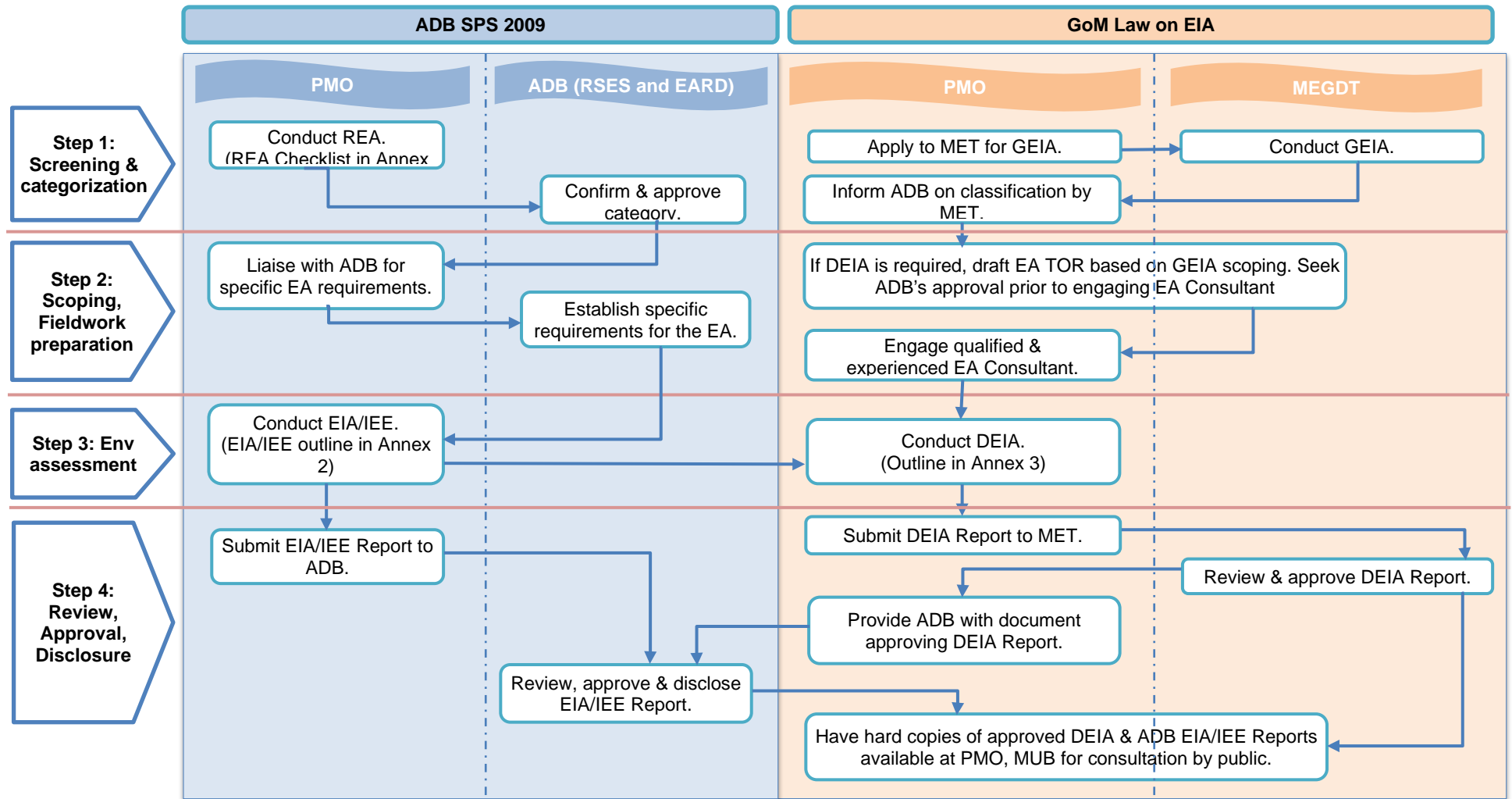
STEP 4: Review, Approval and Disclosure

69. **Asian Development Bank.** Depending on the classification of the tranche, the following procedure shall be followed for review, approval and disclosure of the environmental assessment of all three tranches:

- (i) Category A: (a) review and approval of draft EIA by ADB; (b) disclosure of draft EIA at least 120 days before the periodic financing request for the respective Project is approved by ADB; and (c) Disclosure of Final EIA upon receipt replacing the draft EIA;
- (ii) Category B: (a) review and approval of draft IEE by ADB's regional department (EARD); (b) disclosure of final IEE upon receipt, but before periodic financing request for the respective Project is approved by ADB.

70. **Ministry of Environment and Green Development.** A DEIA must be approved by MET before periodic financing request for the respective Project is approved by ADB. Hard copies of the ADB's EMP shall be made available in Mongolian for public consultation at MUB, the PMO and other locations accessible to stakeholders, e.g., the subproject districts and khoroos.

Figure 3. Environmental Assessment Procedure Under the Program



V. CONSULTATION, INFORMATION DISCLOSURE, AND GRIEVANCE REDRESS MECHANISM

A. Consultation and Information Disclosure

Compliance with ADB & GoM Environmental Safeguard Requirements

71. The SPS 2009 of the ADB has as one of the principles of its environmental safeguards “to carry out meaningful consultation with affected people and facilitate their informed participation”. The Policy clarifies meaningful consultation as “a process that: (i) begins early in the project preparation stage and is carried out on an on-going basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues”.

72. Projects classified as Category A and Category B (ADB) and/or requiring a DEIA (MET) are required to undertake meaningful public consultations during environmental assessment. Public consultation can take the form of distributed information materials and pamphlets, individual interviews, and formal public meetings organized by project proponent, consultants and/or an engaged DEIA entity. This will involve affected people and concerned stakeholders to elicit their views and concerns on the subprojects/activities. Public consultation shall ensure the participation of a fair representation of stakeholders: (i) those who will benefit from, and will be affected by, the tranche and its components and subprojects; (ii) the vulnerable groups – the poor (those within the poverty threshold), ethnic minorities, informal settlers, disabled people, the youth, migrants, women (especially women heads of household) and seniors; (iii) other interested groups e.g., NGOs, religious groups, business associations, civil society, academe, etc. Consultation shall be conducted, and its hand-outs shall be written, in the local language.

73. **Minimum requirements for public consultation** during the EA process are as follows:

- (i) For tranches classified as **Category A** by ADB, at least:
 - (a) once during the early stages of EIA field work, to allow the affected communities and other interested parties to share their views on the proposed tranche, its components and subprojects, environmental issues and concerns without and with the subproject, measures to address the issues and concerns, and willingness to participate in environmental monitoring activities; and
 - (b) once as soon as the draft EIA report is available, and prior to ADB appraisal, to present the findings for their information and feedbacks.
- (ii) For tranches classified as **Category B** by ADB, and/or **requiring a DEIA (MET)**:
 - (a) at least once, in the early stages of the EA process to allow the affected communities and other interested parties to share their views on the proposed tranche, its components and subprojects, environmental issues and concerns

without and with the subproject, measures to address the issues and concerns, and their willingness to participate in environmental monitoring activities.

- (iii) For all categories, additional consultations will be held, when deemed necessary. Consultation must continue throughout construction and into the operation phase. During construction, consultation may be undertaken in the forms of formal questionnaire surveys and informal interviews. The consultation should focus on public complaints about community annoyances from construction activities, such as construction noise and dust, as well as public concerns about the environment and resettlement. Immediate adjustments must be undertaken to address any public complaints and concerns. Public consultation must also continue during the first year of operation.

74. **Documentation.** The consultation process shall be well documented. All relevant views raised during the consultation shall be incorporated in the environmental assessment report and its environmental management plan, and considered in subproject design. Attendance sheets and notes of consultations (**Annex 9**) shall be included in the environmental assessment report as proof that consultation/s had been held. To comply with the MON legislation (as stipulated in the Law on EIA): (i) the opinions of citizens and soum/district officials of subproject areas shall be documented and form part of the DEIA Report (**Annex 8**); and (ii) the opinions of affected citizens shall also be taken into account when MET makes the decision on the approval of the DEIA Report and granting the Project clearance/permit to implement.

75. **Information disclosure.** MUB, through the PMO, is responsible for ensuring that all environmental assessment documents and environmental monitoring reports are properly and systematically kept as part of the project record. MUB/PMO shall make these documents available in a form, language and at a location in which they can be easily accessed by all stakeholders including affected people.

76. In addition, according to ADB's requirements, the environmental assessment document (IEE including EMP); annual Environmental Progress Report and semi-annual Environmental monitoring reports) submitted by the PMO must be submitted to ADB and will be posted on ADB's website.

77. The MUB, PMO and the MET shall ensure public access to the approved DEIA Report and its EMP.

78. Hard copies of the above documents (in English and in Mongolian) will be made available for consultation at the PMO (Room # 403, Central Cultural Palace, Amar Street 2, Sukhbaatar district 8th Khoroo, Ulaanbaatar), MUB, USUG (Tokyo Street-5, Bayanzurkh District) and other locations accessible to the stakeholders. In order to ensure harmonized compliance with the GoM and ADB information disclosure requirements, it shall be a policy under the Program for the local governments (concerned soums/districts and khoros) to have copies of the same documents for easy information access by affected citizens. The PMO shall be responsible for filing all documents systematically for easy access by stakeholders.

B. Grievance Redress Mechanism

79. A project-specific grievance redress mechanism (GRM) established for Tranche 1 and Tranche 2, which is designed to receive, evaluate, and facilitate the resolution of AP's concerns, complaints, and grievances about the social and environmental performance at the level of the project, will be applied to Tranche 3. The GRM will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. All project agencies (**Figures 4 & 5**) will be aware of the GRM and inform the PMO of any complaints received.

80. Ulaanbaatar city has adopted its own grievance redress system in 2013 with the mayor's Order No. A/1086. All agencies and projects under MUB are required to implement this GRM system (Figure 79 below). GADIP Program has adopted this GRM system which is currently being implemented for the Tranche 1 phase of the Program.

Figure 4. Grievance redress mechanism of Municipality of Ulaanbaatar

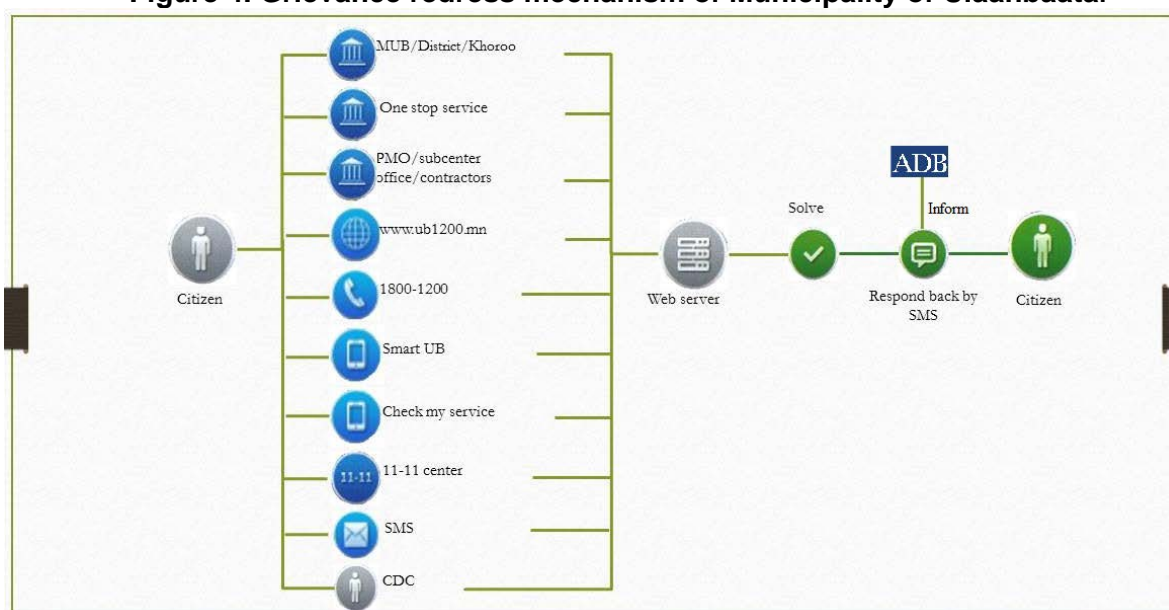
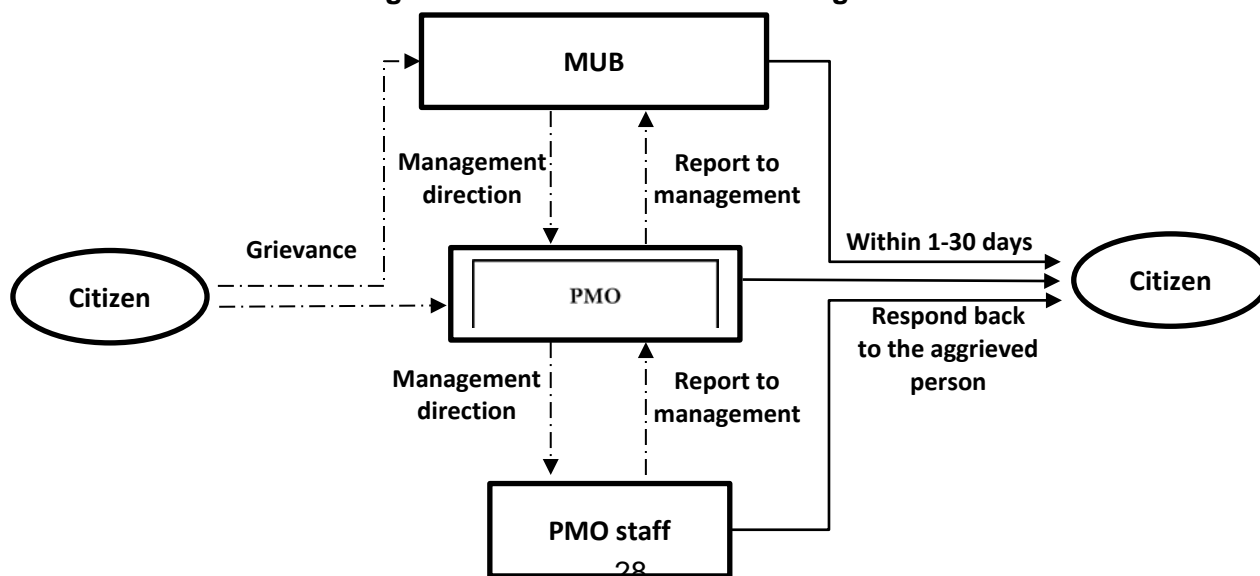


Figure 5. Grievance resolution diagram



81. This Grievance Redress Mechanism (GRM) provides an effective approach for resolution of environment related complaints and issues of the affected person/community. Project Management Office (PMO) formulates procedures for implementing the GRM and PMO's engineering staff shall undertake GRM's initiatives that include procedures of taking/recording complaints, handling of on-the-spot resolution of minor problems, taking care of complainants and provisions of responses to distressed stakeholders etc. paying particular attention to the impacts on vulnerable groups.

82. The GRM will be introduced during community consultations and made publicly available to stakeholders throughout the project. In the event of a grievance issue, up to four stages will be implemented, as follows.

- (i) **Step 1:** Access to GRM. The GRM system enables affected person (local residents, representatives of local business entities, workers of contractors etc) to issue a complaint choosing the most comfortable way out of 10 options (see Figure 4 at para 80 above). The affected person's complaint will directly be recorded in the central web server of MUB which is linked to all 10 entry points shown in Figure 4. The complaint record includes details such as the grievance issue, the affected person's name, contact and date of grievance.
- (ii) **Step 2:** Received complaint is assigned to the relevant personnel either in PMO or to the relevant department/division/unit in MUB.
- (iii) **Step 3:** The PMO will take steps to investigate and resolve the issue (Figure 5). This may involve instructing the contractor to take corrective actions. The contractor should implement the redress solution and convey the outcome to the PMO and notify ADB. Depending on the type and complexity of the grievance issue, PMO/MUB to solve the issue between 1-30 days after receiving the compliance.
- (iv) **Step 4:** PMO will respond to the affected person with the solution or corrective action. Once the solution is provided to the affected person, compliance officers of MUB contacts the affected person with a separate call to confirm if the person is satisfied or not. Received complaints, solutions and redress status will be included in the quarterly Environmental Monitoring Report to ADB.

83. *Community* -wide public awareness campaigns will ensure that awareness on grievance redress procedures is generated through the campaign. The project management office (PMO) designated focal person (environment and social issue) and community development consultants will conduct community -wide awareness campaigns to ensure that poor and vulnerable households are made aware of grievance redress procedures and entitlements, and will work with the PMO and, supervision consultants to help ensure that their grievances are addressed.

84. Affected persons (APs) will have the flexibility of conveying grievances/suggestions by dropping grievance redress/suggestion forms in one stop shops that have already been installed by MUB or through telephone hotlines at accessible locations, by e-mail, by post, or by writing (see GRM entry points illustrated in **Figure 4**) in a complaints register in one stop shop.

85. **Appendix 14** has the sample grievance registration form. Careful documentation of the name of the complainant, date of receipt of the complaint, address/contact details of the person, location of the problem area, and how the problem was resolved will be undertaken. The project management office (PMO) officer (who will responsible for environment and social issue) will have the overall responsibility for timely grievance redresses on environmental and social safeguards issues.

86. **Record keeping.** Records of all grievances received, including contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were effected and final outcome will be kept by the PMO. The number of grievances recorded and resolved and the outcomes will be displayed/disclosed in the PMO office, MUB, and on the web, as well as reported in monitoring reports submitted to ADB annually.

87. **Periodic review and documentation of lessons learned.** The PMO officer (responsible for environment and social) will periodically review the functioning of the GRM in each khoroo and record information on the effectiveness of the mechanism, especially on the project's ability to prevent and address grievances

88. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the PMO.

VI. INSTITUTIONAL ARRANGEMENT AND RESPONSIBILITIES

A. Responsibilities for EARF implementation

89. The key players in the implementation of the EARF are the Municipality of Ulaanbaatar (MUB), Subcenters Redevelopment Authority (SRA), Ulaanbaatar Water and Sewerage Authority (USUG), Project Steering Committee (PSC), the Program Management Office (PMO), MET and the ADB.

90. The **MUB** will be the **executing agency** and an **implementing agency** for the Program. With regard to the Program's environment management and its safeguards compliance, MUB will be responsible for: (i) providing counterpart assistance for environmental safeguards, as required (at least an Environmental Engineer/Scientist as the main environmental safeguard staff in the PMO); and (ii) firming up the necessary collaboration with subproject districts and relevant agencies to ensure compliance with environmental safeguard obligations.

91. The MUB has proposed to establish a **sub center redevelopment authority (SRA)**, a city-owned enterprise dedicated to the *ger* area sub center redevelopment that will facilitate, supervise, and coordinate the redevelopment process of Subcenters and guide the land readjustment process, including the individual land upgrading, direct trading method, and land pooling. It has been proposed that such an institution will report to a board of directors with 40% membership from the MUB, 30% from the community, and 30% from the private sector. This special purpose delivery vehicle will facilitate, coordinate and manage the redevelopment and densification process. More specifically, it will assist in realizing Subcenters Development Plans (SDPs) and ensure the strict application of the development plan, principles, land use ratios, and construction standards; and supervise private sector participation in the construction of residential units/compounds, in accordance with community needs and expectations, and private sector interests. SRA will also (i) facilitate obtaining the necessary inputs and/or assistance from the subproject khoros, communities and concerned private sector to meet environmental safeguard obligations; and (iii) firm up collaboration with subproject khoros in consultations and information disclosure, environmental monitoring, and implementation/observance of the grievance redress mechanism.

92. The **USUG**, as an implementing agency, will: (i) provide technical assistance and support to the PMO in meeting environmental safeguard obligations/compliance; (ii) as operator for the completed water and sewerage structures, observe the Program's GRM and implement environmental mitigation and monitoring measures that will address as minimum the requirements of the ADB-cleared EMP.

93. The **Project Steering Committee (PSC)** will: (i) provide guidance and advice on environmental safeguard requirements according to relevant policies and loan agreement, as necessary; (ii) be responsible for deciding on environmental management matters that will require action from the senior management level; and (iii) facilitate obtaining the necessary inputs and/or assistance from the MUB, USUG, subproject districts, and as necessary other national agencies to meet environmental safeguard obligations.

94. The **Program Management Office (PMO)** will handle day-to-day activities under the Program. It will be staffed with at least one environmental safeguard staff (an Environmental Engineer/Scientist). The environmental safeguard staff will be responsible for the implementation of the EARF, particularly: (i) evaluating proposed subprojects against the environmental criteria for

subproject selection; (ii) conducting REA, promptly submitting the completed REA Checklist to the ADB for category confirmation; (iii) promptly preparing and submitting the required documents and request for GEIA to MET; (iv) coordinating, with ADB, the preparation of the IEEs/EIAs, including definition of TOR for the environment assessment, supervising environment assessment, and promptly submitting draft IEE/EIA reports to the ADB for review and clearance; (v) engaging a MET-registered consulting entity, experienced in environmental assessment of IFI-funded projects, for the conduct of DEIA, if required; (vi) conducting the required public consultations and information disclosures; (vii) ensuring that DEIA Reports are approved by MET timely, not causing delay of Project fund release; (viii) providing the ADB with copies of the GEIA conclusions and DEIA review conclusions/approvals; (ix) ensuring the operation/observance of the grievance redress mechanism; (x) carrying out the PMO's tasks in environmental monitoring; and (xi) reporting on the status of EARF compliance/implementation and EMP implementation.

95. Clearly, the environmental safeguard staff will need technical assistance to be able to effectively carry out all the tasks mentioned above. He/she will be supported by environmental specialists that will be engaged under the Program Implementation Support. The environmental specialists will also provide the environmental safeguard staff and the PMO "hands-on" capacity building relative to EARF and EMP implementation.

96. The **MET** will: (i) screen the GEIAs for each tranche and review and approve DEIAs accordingly; and (ii) provide advice and guidance on policy compliance/requirements, as necessary.

97. The **ADB** will: (i) review the completed REA Checklist and confirm categorization of each tranche; (ii) review updated EARF, if applicable, and IEEs/EIAs of each tranche for clearance and disclosure; (iii) review periodic environmental monitoring reports; (iv) conduct environmental monitoring/review missions; (v) provide advice and guidance on the requirements of the ADB SPS 2009, as necessary; (vi) disclose environmental monitoring reports on ADB's project website in accordance with ADB's disclosure policies; and (vii) reflect safeguard-related risks and issues of the MFF, and actions being taken to mitigate the risks and resolve the issues, in the consolidated annual reports on the performance of all approved MFFs of the operational department.

98. Under the **Project Implementation Support (PIS)**, environmental specialists (one international and one national) will be engaged to lend technical assistance to the PMO in EARF implementation and provide capacity building/training in environmental management in line with the Capacity Building and Institutional Strengthening Component.

99. Qualified and experienced **external environmental experts** (or qualified NGOs) will be retained by MUB to verify monitoring findings (i.e. verification of the semi-annual environmental progress and monitoring reports) of Category A tranches (i.e., tranches with potentially significant adverse environmental impacts). The external experts or NGOs may conduct site inspections to review and verify with confidence project monitoring reports produced by the borrower/client. MUB as the EA will bear the costs of the external verification.

B. Capacity Building

100. Capacity building in environmental management will aim to ensure effective implementation of the EARF. It is proposed to be implemented through the: (i) environmental specialists that will be engaged under the Program Implementation Support (PIS); and (ii) Capacity Development Program under the Capacity Building and Institutional Strengthening Component. While carrying out technical assistance, the PIS environmental specialists will conduct lectures/seminars on topics relevant to the EARF and will ensure that the EARF implementation will be a "hands-on" training for the PMO,

particularly its environmental safeguard staff, as well as the MUB and the USUG. The Capacity Development Program shall invite external experts to conduct lectures/seminars on other environmental management topics such as those suggested in **Table 7** and/or other topics that would be requested by the PMO, MUB and/or USUG.

101. The cost requirement for the conduct of the courses and seminars by external experts is included in the overall budget for Capacity Development Programme.

102. The Environmental specialists of Project Implementation Supporting Team (PIS) has already developed various topics for Capacity building/training related to environment safeguards which is shown in Table 8.

C. Staffing Requirement and Budget

103. Staffing requirement for EARF implementation in each tranche will include: (i) an environmental safeguard staff in the PMO to oversee EARF implementation; (ii) one international and one national environmental specialists in the PIS to provide technical assistance and capacity building; (iii) if applicable, a MET-registered entity to conduct DEIA; and (iv) external experts to conduct lectures/seminars under the Capacity Development Program.

104. Proposed topic, target attendance and duration of the capacity building trainings are shown in Table 7 below.

Table 8. Proposed Topics for Capacity Building/Training*

Topic	Target Participants	Timing	Duration / Cost
1. By PIS Environmental Specialists			
1.1 Legal Framework			
a Relevant GoM laws, regulations & standards on environmental assessment & management	MUB-DE, USUG	Early stage of PIS	½ day c/o PIS-TA
b ADB SPS 2009	PMO, SRA, Concerned khoros		
c EA procedure under the Program - Harmonizing the GoM & ADB safeguard Requirements			
1.2 Some Aspects of EA Process & Environmental Management	MUB-DE, USUG	Early stage of PIS	½ day c/o PIS-TA
a Meaningful consultation & information Disclosure	PMO, SRA, Concerned khoros		
b Grievance redress mechanism			
c Environmentally responsible procurement			
d Occupational & community health and safety			
1.3 EMP Implementation	MUB-DE, USUG	Early stage of PIS	½ day c/o PIS-TA
a Implementation arrangements	PMO, SRA, Concerned khoros		
-Institutional responsibilities			
-Environmental monitoring and reporting			
b Emergency response			
c Performance indicators			

2. By External Experts 2.1 Other relevant topics <ul style="list-style-type: none"> a Climate change and adaptation (applicable to eligible projects under the Program) b Good engineering and construction practices as mitigation measures c Other relevant topics that may be requested by MUB &/or PMO 	MUB-DE, USUG PMO, SRA, Concerned khoroos	During Program's Capacity Building	2-3 days
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Note: Best practices relevant to each topic to be presented, where applicable.

Table 9. Proposed Topics for Capacity Building/Training under PIS

Topic	Objectives	Subtopic	Target Participants
1. Legal Framework	<ul style="list-style-type: none"> Know a list of applicable national (Mongolian) and Donor (ADB) environmental assessment requirements Acquainted with pertinent regulation and standards governing the environmental quality, health and safety, protection of sensitive areas and any other relevant regulation governing the proposed Ger Areas development investment program interventions 	1.1 Relevant GoM laws, regulations & standards on environmental assessment & management 1.2 ADB Safeguard Policy Statement-2009(Environment) 1.3 Environmental Assessment Procedure under the Program-Harmonizing the GoM & ADB Safeguard Requirements 1.4 Environmental Quality and Health and Safety Standards	MUB-DE, USUG, PMO, Concerned Environmental Department of relevant districts; Representatives of relevant Khoroos
2. Baseline and Public Consultation	<ul style="list-style-type: none"> Understand the objective of baseline and its importance in the EIA and type of information needed for baseline Know various methodology adopted for baseline data collection Identify the principles and requirements for consultation with stakeholders and the tools and techniques that can be used for this purpose. 	2.1 Baseline Data Collection 2.2 Meaningful Consultation and Information Disclosure 2.3 Grievance Redress Mechanism	Concerned personnel of MUB, PMO, supervision consultant team
3. Impact Assessment and Mitigation Measures	<ul style="list-style-type: none"> Provide an overview of the tools and methods used to identify, predict and evaluate different types of impacts 	3.1 Identification and Assessment of Impacts 3.2 Potential Environmental Impacts and Mitigation Measures	Concerned personnel of MUB, PMO, supervision consultant team

	<ul style="list-style-type: none"> Understand the role of mitigation in EIA process and its importance for impact management 		
4.Environmental Management and Monitoring Plan (EMMP)	<ul style="list-style-type: none"> Identify the principles, elements, and contents that are used for preparing Environmental Management and Monitoring Plan Find out major institutional arrangements for EMP implementation 	4.1 Guiding Principles of EMP 4.2 EMP Implementation arrangements <ul style="list-style-type: none"> Institutional responsibilities Environmental monitoring and reporting 4.3 Performance Indicators 4.4 Occupational and Community health and safety	Concerned Engineers of PMO (Executing as well as implementing level), Engineers of construction supervision team, Civil Works Contractors
5. Environmental Sound Construction Management	<ul style="list-style-type: none"> Able to knowledge about Environmental Specification in contract documents and their implications Guide on Good construction practice 	5.1 Construction/Engineering Practice 5.2 Environmental Specification for Bid Documents 5.3 Incorporating EMP into Bid Documents 5.4 Environmental Code of Practice 5.5 Environmentally responsible procurement	Concerned Engineers of PMO (Executing as well as implementing level), Engineers of construction supervision team, Civil Works Contractors

VII. MONITORING AND REPORTING

A. Monitoring

105. Project and subproject monitoring will be conducted prior to construction (feasibility study, detailed engineering and procurement stages), during construction, and during operation. The MUB shall monitor the performance of the Projects and their subprojects in terms of:

- (i) conforming to the EARF, as follows:
 - IEE finalization during the detailed engineering design stage;
 - For all three tranches: (a) conduct of EIA for Category A tranche/s and IEE for Category B tranche/s, and the preparation of the appropriate reports; (b) subjecting the tranches to GEIA by the MET; (c) conducting the DEIAs, if required, and having these reviewed and approved by the MET.
 - Submission of EIA/IEE reports to ADB for review, clearance and disclosure;
 - Providing ADB copy of every GEIA conclusion and DEIA review conclusion/ approval; and
 - Preparation and submission of monitoring reports as prescribed under “Reporting” in the next sub-section.
- (ii) conforming to the approved monitoring plan defined in the environmental management plans (EMPs, see below).

106. **EMP implementation monitoring.** MUB will ensure that the EMPs for each tranche include a monitoring plan which describes monitoring measures with technical details, including parameters

to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions. The monitoring program shall focus on the environment within the project's area of influence. The extent of monitoring activities during construction and operation shall be commensurate with the tranche's risks and impacts:

- (iii) For *category B* tranches, monitoring shall involve compliance inspections, as well as the sampling and analysis of air, noise and surface water, in order to assess their quantity against requirements specified in the EMP;
- (iv) For *category A* tranches, ambient monitoring to assess the quality of the receiving environment (e.g., air quality, water quality, or noise levels in the project area of influence) in addition to compliance inspections are required. Ambient monitoring may provide useful feedback on the extent and severity of actual environmental impacts against predicted impacts and relevant ambient standards specified in the EIA/EMP.

107. Monitoring shall also cover significant events or issues encountered during construction; changes in project design and EMP, including corrective actions, if applicable; and compliance with the relevant provisions in the project legal agreement.

108. **External monitoring verification.** For tranches likely to have significant adverse environmental impacts (category A), the borrower/client will retain qualified and experienced external experts or qualified NGOs to verify its monitoring findings. External experts or NGOs are expected to have extensive experience in the design, delivery and quality assurance/quality control aspects of monitoring relevant to the specific design of the project monitoring program. The external experts or NGOs may need to conduct site inspections so as to be able to review and verify with confidence environmental monitoring reports produced by the borrower/client.

109. **Periodic EARF review.** From time to time, the MUB shall monitor the applicability of the EARF. In order to ensure that the EARF remains consistent with the environmental policy framework of the Government of Mongolia and the safeguards policy of the ADB, an update that also considers lessons learned during implementation shall be undertaken. The updated EARF shall be forwarded to the ADB for review, clearance and disclosure. Changes to the EARF shall be reported through the periodic environmental monitoring reporting process.

B. Reporting

110. The MUB, through the PMO, shall prepare periodic environmental monitoring reports (EMRs) that describe progress in implementation of the EMP and compliance issues and corrective actions, if any. The environmental progress and monitoring report should follow the sample outline for a periodic project environmental monitoring report provided in **Annex 11** of this EARF. The EMRs shall also document the effectiveness and lessons learned in environmental mitigation and environmental impact monitoring, as well as grievances received and resolved. Depending on the environmental category of the MFF tranche, the following environmental progress and monitoring reports will be provided by MUB to ADB:

- (v) **Category A, construction phase:** (i) semi-annual environmental progress and monitoring reports; and (ii) semi-annual environmental monitoring verification reports. MUB shall contract qualified and experienced external experts or qualified NGOs to verify its semi-annual environmental progress and monitoring reports.
- (vi) **Category A, operation phase:** (i) annual environmental progress and monitoring reports until the issuance of project completion report.
- (vii) **Category B:** annual environmental progress and monitoring reports.

111. **Corrective actions.** If monitoring identifies weakness or deficiencies in the implementation of the EMP, the MUB shall define corrective actions. Corrective actions could range from improving technical aspects of mitigation implementation to enhancing the environmental management capacity of implementing agencies. A corrective action plan generally:

- (viii) describes corrective actions necessary to address each area of concern;
- (ix) prioritizes these actions;
- (x) identifies responsibilities for implementation of each corrective action;
- (xi) identifies a time-line for their implementation; and,
- (xii) presents a schedule for communicating the results of plan implementation to affected communities and ADB.

VIII. APPENDICES

Appendix 1. National Air Quality Standard & WHO Air Quality Standard

Parameter	MNS 4585:2016 (mg/m ³)		EHS Guidelines. World Health Organization (WHO). Air Quality Guidelines Global Update.2005)-μg/m ³)	
SO ₂	24-hour	50	24-hour	125 (Interim target-1)
				50 (Interim target-2)
				20 (guideline)
	20 minute	450	10 minute	500 (guideline)
	1-year	20		
NO ₂	1-year	40	1-year	40 (guideline)
	24-hour	50	24-hour	-
	20-min	200	1-hour	200 (guideline)
PM ₁₀	1-year	50	1-year	70 (Interim target-1)
				50 (Interim target-2)
				30 (Interim target-3)
	24-hour	100	24-hour	150 (Interim target-1)
				100 (Interim target-2)
				75 (Interim target-3)
				50 (guideline)
PM _{2.5}	1-year	25	1-year	35 (Interim target-1)
				25 (Interim target-2)
				15 (Interim target-3)
				10 (guideline)
	24-hour	50	24-hour	75 (Interim target-1)
				50 (Interim target-2)
				37.5 (Interim target-3)
				25 (guideline)
CO	Average in 1 hour	30g/m ³		No standard

Appendix 2. National Noise Standards MNS 4585:2016 & WHO Noise Standard

Receptor	MNS 4585:2007		EHS Guidelines (Guidelines for Community Noise. World Health Organization (WHO), 1999)	
Residential, Institutional, Educational	07 00 - 23 00	60 dB(A)	07 00 - 22 00	55 dB(A)
	23 00 - 07 00	45 dB(A)	22 00 - 07 00	45 dB(A)

Appendix 3. National surface water quality standard MNS 4586:1998

Parameter	Measuring unit	MNS 4586:1998
pH		6.5-8.5
DO	mg/l	not less than 6&4
BOD	mg/l	3
NH ₄ *N	mgN/l	0.5
NO ₂ *N	mgN/l	0.002
NO ₃ *N	mgN/l	9
PO ₄ -P	mgP/l	0.1
A	mg/l	300
F	mg/l	1.5
SO ₄	mg/l	100
Mn	mg/l	0.1
Ni	mg/l	0.01
Cu	mg/l	0.01
Mo	mg/l	0.25
Cd	mg/l	0.005
Co	mg/l	0.01
Pb	mg/l	0.01
As	mg/l	0.01
Cr	mg/l	0.05
Cr ₆₊	mg/l	0.01
Zn	mg/l	0.01
Hg	mg/l	0.1
Oil	mg/l	0.05
Phenol	mg/l	0.001
Active and washing substances	mg/l	0.1
Benzopyren	Mkg/1	0.005

There are no comparable EHS guidelines in this regard.

* DO >6 mg/l for summer time and DO »4 mg/l for winter time

Appendix 4. National ground water quality standard MNS 900-2005 & WHO Standards

Parameter	MNS 900:2005		WHO Guidelines for Drinking Water Quality, Fourth Edition. 2011	
Na-	mg/l	200		None established
K-	mg/l	200		None established
Ca ²⁺	mg/l	100		-
Mg ²⁺	mg/l	30		-
SO ₄ ²⁻	mg/l	500		None established
HCO ₃ ⁻	mg/l	-		-
CO ₃ ²⁻	mg/l	-		-
Cl	mg/l	350	mg/l	5
P	mg/l	0.7-1.5		-
Br		-		None established
Test, by mark	mg/l	2		-
Color	degree	20°		None proposed
Odor	mark	2		-
pH		6.5-8.5		None established
Electric Conductivity Y S/cm		-		-
General Minerals		1000		-
Hardness	mg-eqv/l	7		None established
Acidity potential	mB			-
Solid remains	g/l	1		-
NH ₄ ⁺	mg/l	1.5		None established
NO ₃ ⁻	mg/l	50	mg/l	50
NO ₂ ⁻	mg/l	1	mg/l	3
PO ₄ ³⁻	mg/l	35		-
As	mg/l	0.01	mg/l	0.01
Fe	mg/l	0.3		None established
Pb	mg/l	0.03	mg/l	0.01
Ni	mg/l	0.02	mg/l	0.07
Cr	mg/l	0.05	mg/l	0.05
Cu	mg/l	0.1	mg/l	2
Zn	mg/l	5		None established
Mn	mg/l	0.1		None established
Cd	mg/l	0.003	mg/l	0.003
Hg	mg/l	0.0005	mg/l	0.006
B	mg/l	0.5	mg/l	24
Ba	mg/l	0.7	mg/l	0.7

Parameter	MNS 900:2005		WHO Guidelines for Drinking Water Quality, Fourth Edition. 2011	
Mo	mg/l	007		None established
Se	mg/l	001	mg/l	004
E coli or thermo tolerant coliform bacteria		*		Must not be detectable in any 100 ml sample

MNS 0900:2005. Drinking Water Hygienic Requirement and Quality Control is the standard used for groundwater supply, which is the source for drinking water supply in Mongolia

Appendix 5. National Soil Quality Standard MNS 5850-2008

Parameter	MNS 5850:2008			
	Soil Mechanical Composition			Maximum Allowed Level *
	Clay	Loamy	Sandy	
Pb	100	70	50	100
Cd	3	1.5	1	3
Hg	2	1	05	2
As	6	4	2	6
Cr	150	100	60	150
Cr6+	4	3	2	4
Sn	50	40	30	50
Sr	800	700	600	800
V	150	130	100	150
Cu	100	80	60	100
Ni	150	100	60	150
Co	50	40	30	50
Zn	300	150	100	300
Mo	5	3	2	5
Se	10	8	6	10
B	25	20	15	25
F	200	150	100	200
CN	25	15	10	25

* There are no soil quality International standards for EHS guidelines.

Appendix 6. National Boiler Emission Standard MNS 6298:2011 & EHS Guidelines

Guideline	Parameter in mg/Nm ³			
	MNS 6298:2011		EHS Guidelines *	
SO ₂	mg/m ³	400 urban 600 remote areas	mg/Nm ³	2000
NO _x	mg/m ³	450-1.100 based on volatile	mg/Nm ³	650
PM	mg/m ³	50-200	mg/Nm ³	50-150

* Small Combustible facilities Emission Guidelines (3 MWth-50 MWth) - for Boilers using solid fuel; MWth - Megawatt thermal; Nm³ is at one atmospheric pressure. 0°C

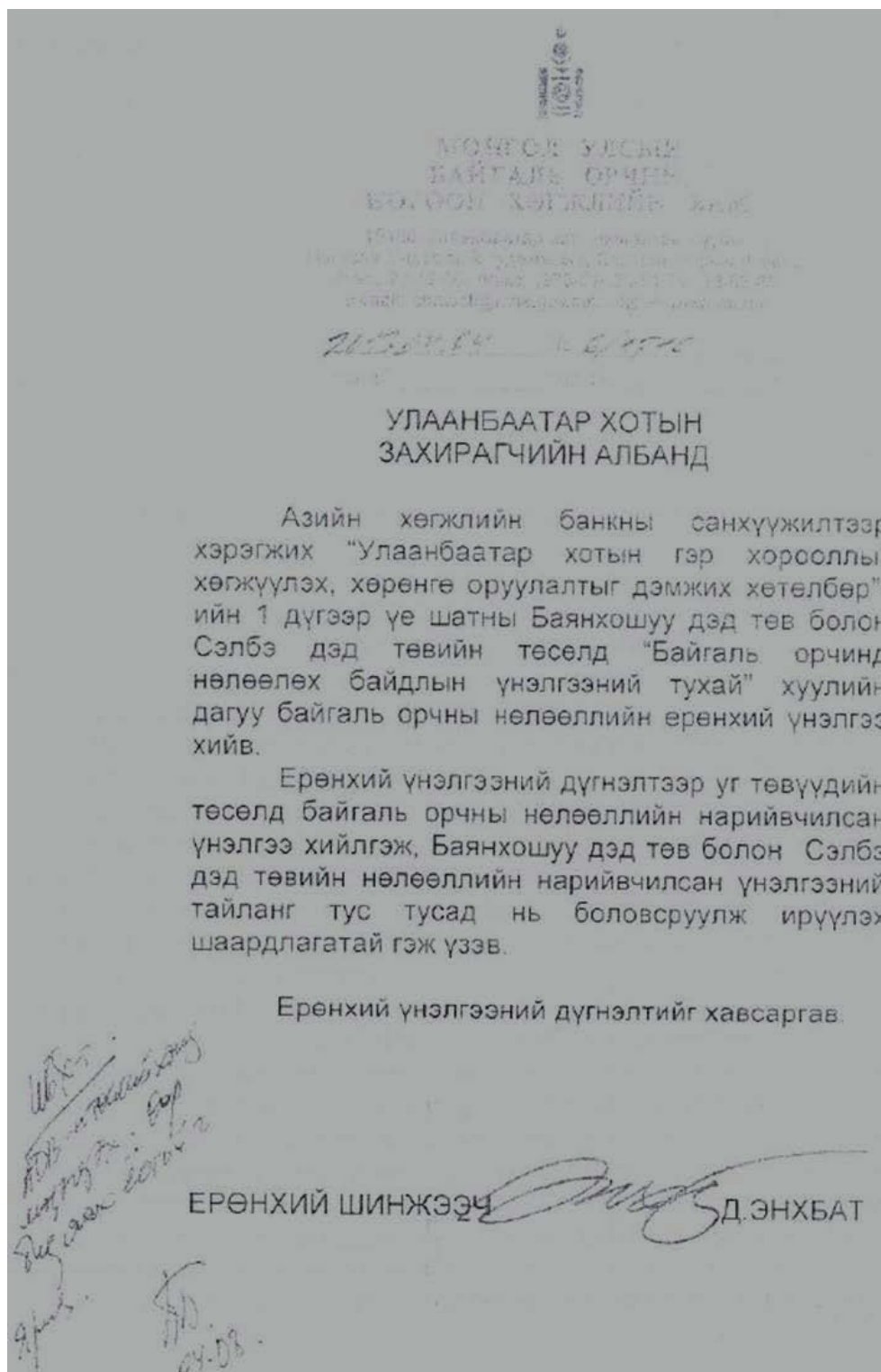
Appendix 7. National Standard on Wastewater Discharge to Effluents (MNS- 4943-2011)

№	Parameter	Measuring unit	Maximum allowance	EHS Guidelines*
1	Water temperature	C	20	
2	Hydrogen ion activity (pH)	-	6-9	6-9
3	Odor	Sense	No bad smell	
4	Suspended solids (SS)	mg/l	50	
5	Biochemical Oxygen Demand (BOD)	mg/l	20	30
6	Chemical Oxygen Demand (COD)	mg/l	50	125
7	Permanganate	mg/l	20	
8	Dissolved Salt	mg/l	100	
9	Ammonia Nitrogen (NH ₄ -N)	mg/l	6	
10	Total Nitrogen (TN)	mg/l	15	10
11	Total Phosphorous (TP)	mg/l	1.5	2
12	Organic Phosphorous (DOP)	mg/l	0.2	
13	Hydrogen Sulphide (H ₂ S)	mg/l	1	
14	Total Iron (Fe)	mg/l	1	
15	Aluminium (A)	mg/l	0.5	
16	Manganese (MN)	mg/l	0.5	
17	Total Chromium (Cr)	mg/l	0.3	
18	Chromium +6 (Cr+6)	mg/l	Not specified	
19	Total cyanide (CN)	mg/l	0.05	
20	Free cyanide (CN)	mg/l	0.05	
21	Copper (Cu)	mg/l	0.3	
22	Boron (B)	mg/l	0.3	
23	Lead (Pb)	mg/l	0.1	
24	Zinc (Zn)	mg/l	1.0	
25	Cadmium (Cd)	mg/l	0.03	

No	Parameter	Measuring unit	Maximum allowance	EHS Guidelines*
26	Antimony (Sb)	mg/l	0.05	
27	Mercury (Hg)	mg/l	0.01	
28	Molybdenum (Mo)	mg/l	0.5	
29	Total Arsenic (As)	mg/l	0.01	
30	Nickel (Ni)	mg/l	0.2	
31	Selenium (Se)	mg/l	0.02	
32	Beryllium (Be)	mg/l	0.001	
33	Cobalt (Co)	mg/l	0.02	
34	Barium (Ba)	mg/l	1.5	
35	Strontium (Sr)	mg/l	2	
36	Vanadium (V)	mg/l	0.1	
37	Uranium (U)	mg/l	0.05	
38	Mineral oil	mg/l	1	
39	Fat oil	mg/l	5	
40	Surface active agents	mg/l	2.5	
41	Phenol (C ₅ H ₂₀ H)	mg/l	0.05	
42	Trichloretilen	mg/l	0.2	
43	Tetrachloretilen	mg/l	0.1	
44	Remained chlorine (Cl)	mg/l	1	
45	Faecal conforms	No/100ml	Not occurring in 1 ml.	400 MPN/100ml

* Based on IFC Standards for Hospital Effluents in Annexure 2

APPENDIX 8a. MET's GEIA Conclusion for Tranche 1



Unofficial translation

From: Ministry of Environment and Green Development

Government Building 2, UN Street 5/2,

Chingeltei District, Ulaanbaatar-15160

Phone: 261966, Fax: (976-51) 266171, 266286

E-mail: contact@mne.gov.com, <http://www.mne.mn>

4 April 2013

No.6/1516

To: Municipal Authority of Ulaanbaatar city

According to the law on Environmental Impact Assessment the General Environmental Impact Assessment GEIA was developed for Bayankhoshuu and Selbe sub-centre's projects, Project 1 of Urban Services and Ger Areas Development Investment Program USGDIP, Asian Development Bank ADB TA7970-MON.

The GEIA conclusion is assigned to contact a Detailed Environmental Impact Assessment DEIA for these subcenters, and it is required to send back DEIAs for both Bayankhoshuu and Selbe sub-center separately.

The GEIA conclusion is attached.

GENERAL EXPERT Enkhbat.D

APPENDIX 8b. MET's GEIA Conclusion for Tranche 2



**МОНГОЛ УЛСЫН
БАЙГАЛЬ ОРЧИН, НОГООН ХӨГЖИЛ,
АЯЛАЛ ЖУУЛЧЛАЛЫН ЯАМ**

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Утас: 26 28 30, 26 61 71, Факс: (976-11) 32 09 43,
E-mail: contact@mne.gov.mn, http://www.mne.mn

2016. 07. 22 № 11/1533
танай _____-ны № _____-т

“УЛААНБААТАР ХОТЫН ГЭР
ХОРООЛЛЫГ ХӨГЖҮҮЛЭХ ХӨРӨНГӨ
ОРУУЛАЛТЫГ ДЭМЖИХ ХӨТӨЛБӨР
ТӨСЛИЙН НЭГЖ”-Д

Ерөнхий үнэлгээний дүгнэлт хүргүүлэх тухай

Танай боловсруулж ирүүлсэн Улаанбаатар хотын Чингэлтэй дүүргийн 11, 12, 19-р хорооны нутаг дэвсгэрт Улаанбаатар хотын гэр хорооллыг хөгжүүлэх хөрөнгө оруулалтыг дэмжих хөтөлбөр төслийн Дэнжийн 1000 бичил дэд төвийн төслийн баримт бичигт Байгаль орчинд нөлөөлөх байдлын үнэлгээний тухай хуулийн 7 дугаар зүйлийн 7.3, “Байгаль орчны нөлөөллийн үнэлгээ хийх журам”-ын 3 дугаар зүйлийн 3 дахь хэсгийг үндэслэн, байгаль орчны нөлөөллийн үнэлгээний батлагдсан аргачлалд заасны дагуу байгаль орчны нөлөөллийн ерөнхий үнэлгээ хийлээ. Ерөнхий үнэлгээний дүнгээр тус төсөлд нарийвчилсан үнэлгээ хийлгэх шаардлагатай гэж үзэв.

Ерөнхий үнэлгээний гүйцэтгэлийн хуудаст заасан нарийвчилсан үнэлгээний явцад тодруулах асуудлууд, онцгойлон анхаарах чиглэлийг харгалзан байгаль орчны нөлөөллийн нарийвчилсан үнэлгээг эрх бүхий мэргэжлийн байгууллагаар хийлгэж, байгаль орчны менежментийн төлөвлөгөөний төслийг боловсруулан 2017 оны 3 дугаар улиралд багтаан Байгаль орчин, ногоон хөгжил, аялал жуулчлалын яаманд ирүүлэхийг үүгээр мэдэгдье.

Жич: Ерөнхий үнэлгээний гүйцэтгэлийн хуудсыг хавсаргав.

ЕРӨНХИЙ ШИНЖЭЭЧ



П.БҮНЧИНЖАВ

Unofficial translation

To: Ulaanbaatar Ger Area Development Investment
Program, Project Management Office

From: Ministry of Environment, Green Development and Tourism

Government Building 2, UN Street 5/2,

Chingeltei District, Ulaanbaatar-15160

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E-mail: contact@mne.gov.com, <http://www.mne.mn>

22 July 2016

No.11/4532

Regarding delivery of General Environmental Impact Assessment

According to Clause 7.3 in the Law on Environmental Impact Assessment and Clause 3.3 in EIA Regulation and the methodology of EIA, General Environmental Impact Assessment GEIA was developed for Denjiin 1000 subcenter, Project 2 of Ulaanbaatar Ger Areas Development Investment Program. It was concluded that a Detailed Environmental Impact Assessment is required for the project.

A Detailed Environmental Impact Assessment conducted by a licensed firm with consideration of key areas of concern in the attached checklist and attention points shall be submitted to the Ministry of Environment, Green Development and Tourism together with Environmental Management Plan within quarter 3 of 2017.

The GEIA checklist is attached.

GENERAL EXPERT P.Bunchinjav

APPENDIX 8c. MET's GEIA Conclusion for Tranche 3

Unofficial translation

To: Ulaanbaatar Ger Area Development Investment
Program, Project Management Office

From: Ministry of Environment, Green Development and Tourism

Government Building 2, UN Street 5/2,

Chingeltei District, Ulaanbaatar-15160

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E-mail: contact@mne.gov.com, <http://www.mne.mn>

14 October 2019

No.13/7049

Regarding delivery of General Environmental Impact Assessment

According to Clause 7.3 in the Law on Environmental Impact Assessment and the Methodology of EIA which was adopted with GoM Order No.374 dated 2013, General Environmental Impact Assessment GEIA was developed for Sharkhad subcenter, Project 3 of Ulaanbaatar Ger Areas Development Investment Program. It was concluded that a Detailed Environmental Impact Assessment is required for the project.

A Detailed Environmental Impact Assessment conducted by a licensed firm with consideration of key areas of concern in the attached checklist and attention points shall be submitted to the Ministry of Environment, Green Development and Tourism together with Environmental Management Plan within quarter 4 of 2019.

The GEIA checklist is attached.

GENERAL EXPERT P.Tsogtsaikhan



**МОНГОЛ УЛСЫН
БАЙГАЛЬ ОРЧИН,
АЯЛАЛ ЖУУЛЧЛАЛЫН ЯАМ**

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И-мэйл: contact@mne.gov.mn, Вэбсайт: www.mne.mn

“УЛААНБААТАР ХОТЫН ГЭР
ХОРООЛЛЫГ ХӨГЖҮҮЛЭХ,
ХӨРӨНГӨ ОРУУЛАЛТЫГ ДЭМЖИХ
ХӨТӨЛБӨР ТӨСӨЛ”-Д

2019.10.14 № 13/2049
танай _____-ны № _____-т

Ерөнхий үнэлгээний дүгнэлт
хүргүүлэх тухай

Танай байгууллагаас боловсруулан ирүүлсэн Улаанбаатар хотын Баянзүрх дүүргийн нутаг дэвсгэрт хэрэгжүүлэх “Улаанбаатар хотын гэр хорооллыг хөгжүүлэх, хөрөнгө оруулалтыг дэмжих хөтөлбөр” төслийн 3 дугаар үе шатны Шархад дэд төвийн төсөлд “Байгаль орчинд нөлөөлөх байдлын үнэлгээний тухай” хуулийн 7 дугаар зүйлийн 7.3, “Журам батлах тухай” Засгийн газрын 2013 оны 374 дүгээр тогтоолын 2 дугаар хавсралтаар баталсан “Байгаль орчны нөлөөллийн үнэлгээ хийх журам”-д заасан аргачлалын дагуу байгаль орчны нөлөөллийн ерөнхий үнэлгээ хийлээ.

Ерөнхий үнэлгээний дүнгээр уг төсөлд батлагдсан аргачлалын хүрээнд байгаль орчны нөлөөллийн нарийвчилсан үнэлгээ хийлгэх шаардлагатай гэж үзэв.

Ерөнхий үнэлгээний гүйцэтгэлийн хуудаст заасан нарийвчилсан үнэлгээний явцад тодруулах асуудлууд, онцгойлон анхаарах чиглэлийг харгалзан байгаль орчны нөлөөллийн нарийвчилсан үнэлгээний тайлан, байгаль орчны менежментийн төлөвлөгөөг эрх бүхий мэргэжлийн байгууллагаар хийлгэж 2019 оны 4 дүгээр улиралд багтаан тус яаманд ирүүлэхийг үүгээр мэдэгдье.

Ерөнхий үнэлгээний гүйцэтгэлийн хуудсыг хавсаргав.

ЕРӨНХИЙ ШИНЖЭЭЧ



П.ЦОГТСАЙХАН

APPENDIX 9. ADB List of Prohibited Investment Activities

1. The use of ADB funds is strictly prohibited for the following activities (ADB's Safeguard Policy Statement, 2009).

- I. Production or activities involving harmful or exploitative forms of forced labour⁶ or child labour⁷.
- II. production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phase outs or bans, such as (a) pharmaceuticals⁸, pesticides, and herbicides⁹, (b) ozone-depleting substances¹⁰, (c) polychlorinated biphenyls¹¹ and other hazardous chemicals,¹² (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,¹³ and (e) trans boundary trade in waste or waste products;¹⁴
- III. production of or trade in weapons and munitions, including paramilitary materials;
- IV. production of or trade in alcoholic beverages, excluding beer and wine;¹⁰
- V. production of or trade in tobacco;¹⁵
- VI. gambling, casinos, and equivalent enterprises;¹⁰
- VII. production of or trade in radioactive materials¹⁶, including nuclear reactors and components thereof;
- VIII. production of, trade in, or use of unbounded asbestos fibres;¹⁷
- IX. commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests; and
- X. Marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.

⁶ Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.

⁷ Child labor means the employment of children whose age is below the host country's statutory minimum age of employment or employment of children in contravention of International Labor Organization (ILO) Convention No. 138. 1973. C-138 - Minimum Age Convention. ILO.

⁸ A list of pharmaceutical products subject to phase outs or bans is available at <http://www.who.int>.

⁹ A list of pesticides and herbicides subject to phase outs or bans is available at <http://www.pic.int>.

¹⁰ A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phase out dates. Information is available at <http://www.unep.org/ozone/montreal.shtml>.

¹¹ group of highly toxic chemicals, polychlorinated biphenyls are likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.

¹² A list of hazardous chemicals is available at <http://www.pic.int>.

¹³ A list is available at <http://www.cites.org>.

¹⁴ As defined by the Basel Convention; see <http://www.basel.int>.

¹⁵ This does not apply to project sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a project sponsor's primary operations

¹⁶ This does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which ADB considers the radioactive source to be trivial and adequately shielded.

¹⁷ This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

APPENDIX 10. Rapid Environmental Assessment (REA) Checklist (Urban Development)

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES) for endorsement by the Director, RSES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title:

Sector Division:

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the project area...			
▪ Densely populated?			
▪ Heavy with development activities?			
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site			
• Protected Area			
• Wetland			
• Mangrove			
• Estuarine			
• Buffer zone of protected area			
• Special area for protecting biodiversity			

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> Bay 			
B. Potential Environmental Impacts Will the Project cause...			
<ul style="list-style-type: none"> impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services. 			
<ul style="list-style-type: none"> deterioration of surrounding environmental conditions due to rapid urban population growth, commercial and industrial activity, and increased waste generation to the point that both manmade and natural systems are overloaded and the capacities to manage these systems are overwhelmed? 			
<ul style="list-style-type: none"> degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watersheds and forests)? 			
<ul style="list-style-type: none"> dislocation or involuntary resettlement of people? 			
<ul style="list-style-type: none"> disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable group? 			
<ul style="list-style-type: none"> degradation of cultural property, and loss of cultural heritage and tourism revenues? 			
<ul style="list-style-type: none"> occupation of low-lying lands, floodplains and steep hillsides by squatters and low-income groups, and their exposure to increased health hazards and risks due to pollutive industries? 			
<ul style="list-style-type: none"> water resource problems (e.g. depletion/degradation of available water supply, deterioration for surface and ground water quality , and pollution of receiving waters? 			
<ul style="list-style-type: none"> air pollution due to urban emissions? 			
<ul style="list-style-type: none"> risks and vulnerabilities related to occupational health and safety due to physical, chemical and biological hazards during project construction and operation? 			
<ul style="list-style-type: none"> road blocking and temporary flooding due to land excavation during rainy season? 			
<ul style="list-style-type: none"> noise and dust from construction activities? 			

Screening Questions	Yes	No	Remarks
▪ traffic disturbances due to construction material transport and wastes?			
▪ temporary silt runoff due to construction?			
▪ hazards to public health due to ambient, household and occupational pollution, thermal inversion, and smog formation?			
▪ water depletion and/or degradation?			
▪ overpaying of ground water, leading to land subsidence, lowered ground water table, and salinization?			
▪ contamination of surface and ground waters due to improper waste disposal?			
▪ pollution of receiving waters resulting in amenity losses, fisheries and marine resource depletion, and health problems?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during operation and construction?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

A Checklist for Preliminary Climate Risk Screening

Country/Project Title:

Sector:

Subsector:

Division/Department:

Screening Questions		Score	Remarks ¹⁸
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?		
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc.)?		
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?		
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)?		
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?		

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response, will be categorized as high risk project.

Result of Initial Screening (Low, Medium, High): _____

Other Comments: _____

Prepared by: _____

¹⁸ If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

APPENDIX 11. Terms of Reference for IEE/EIA/DEIA Consultants

i. Objective

1. The objective of the services is to provide guidance and support to the executing agency in the: (i) conduct of environmental assessment (IEE/EIA) of, and (ii) preparation of IEE/EIA report along with environmental management plan for the Project 2 and Project 3 of the Ulaanbaatar Urban Services and Ger Areas Development Investment Program following the Program's Environmental Assessment and Review Framework to ensure compliance with the Mongolian Law on Environmental Impact Assessment (passed in 1998, last amended in 2012) and ADB's Safeguard Policy Statement (SPS 2009).

ii. Scope of Work

2. The IEE/EIA Consultants will conduct environmental due diligence of the components and subprojects under Project 2 (or Project 3). The Consultants shall coordinate with the social participation, social safeguards, and indigenous people experts to ensure consistency of the different safeguard plans. The Consultants' duties include, but are not limited to, the following:

- (i) Review prevailing government regulations and ADB guidelines and policies governing the assessment and management of environmental impacts of projects.
- (ii) Assess the capacity of the PMO and design institutes for environmental assessment, management, and monitoring and recommend the required measures for capacity building.
- (iii) Advise and provide training to the PMO and the design institutes on ADB's safeguard requirements as specified in the SPS.
- (iv) Undertake screening of Project 2 (or Project 3) as soon as sufficient information on the component subprojects and their activities are available by completing the rapid environmental checklist provided in the EARF to determine the environmental category of Project 2 (or Project 3) and corresponding environmental assessment requirements. Completed REA checklist to be submitted to ADB for confirmation and approval of environmental category and environmental assessment requirements.
- (v) Support the executing agency in preparing an official classification request for Project 2 (or Project 3) to the Ministry of Environment and Green Development (MET), in compliance with the Mongolian Law on Environmental Impact Assessment (1998, last amended in 2012). Obtain an environmental impact clearance certificate (or equivalent) from MET.
- (vi) If needed, prepare detail EIA (DEIA) which fully responds to the conclusion of the GEIA issued by MET, and get approval of DEIA(s) by MET.
- (vii) Guided by ADB's confirmation and approval of the environmental category of Project 2 (or Project 3), prepare an initial environment examination (IEE)/environmental impact assessment (EIA) and environmental management plan (EMP), following the format and

contents specified in the annex to appendix 1 of the SPS and ensure rigor in the English version of the project IEE, including the EMP both in English and Mongolian.

- (viii) Evaluate the environmental appropriateness of project components and recommend environmentally friendly options for project component design and construction, including potential use of clean energy sources, reduction of greenhouse gas emissions, and climate change resilient options; provide the necessary environment analysis and justification inputs for the financial and economic analyses of each subproject.
- (ix) Assist the PMO with stakeholder participation, consultation, and involvement during IEE/EIA and EMP preparation and disclosure of relevant information (two rounds of public consultation should be conducted, with participation of environment specialists).
- (x) Establish environmental baseline indicators and performance targets for the DMF.
- (xi) Discuss relevant SPS requirements for project implementation with project stakeholders, assist the team leader in developing the terms of reference for project management consultants, and prepare the terms of reference and budget requirements for environment monitoring and evaluation during project implementation.
- (xii) Participate in the EIA peer review in ADB for tranches categorized A for environment, and revise the project IEE/EIA based on comments received from ADB and external reviewers.

C. Scope of Work

3. The Consultants will consist of at least one international and one national environmental specialist. The International Environmental Specialist will have preferably 15 years of professional experience in environmental impact assessment within the context of urban environmental infrastructure and service provision. The National Environmental Specialist should be affiliated to a national institute with a valid MET license to conduct environmental impact assessment. S/he shall have preferably 10 years of professional experience in environmental impact assessment, with a relevant postgraduate degree. S/he will have experience working in multidisciplinary and international technical assistance projects for international organizations. S/he will have a good command of written and spoken English and experienced in preparing reports in English and Mongolian.

D. Budget

4. The estimated costs for the conduct of DEIAs, the project IEE and the preparation of corresponding reports are presented in Tables 1. The cost estimates assume (i) categorization as B for environment by ADB; and (ii) GEIA concluding on need to prepare Detailed EIAs (DEIAs) for each Subcenters for MET approval.

E. Timetable and Outputs

5. The Consultants will work within the tranche preparation team in the PMO, reporting to the PMO Director. The Consultants will work closely with the safeguard unit of the PMO on a day-to-day basis. The Consultants will report to the ADB tranche preparation team on weekly basis.

F. Timetable and Outputs

6. The Consultants will deliver the following outputs: (i) a completed REA Checklist for tranche categorization, end of Week 2 from mobilization; (ii) draft IEE report after a month (or a draft EIA report after six weeks) from ADB's confirmation and approval of the environmental category of Project 2 (or Project 3); (iii) official request to MET for GEIA, as soon as the required supporting documents are sufficiently available for MET's assessment; (iv) draft DEIA in Mongol (if GEIA conclusion requires the conduct of a DEIA); (v) revised draft IEE/EIA two weeks after receipt of ADB comments on the draft IEE/EIA report; and (vi) a translated IEE and formal endorsement letter by the MUB two weeks after peer review of the revised IEE/EIA.

Table 1: Estimated Cost for IEE

Item	Quantity	Unit Cost	Total Cost
A. <u>Compliance with ADB requirements</u>			
A1. International Environmental Specialist			
A1.1 Professional fee	1.25 person-months	18,000	22,500
A1.2 International travel	1 trip	4,500	4,500
A1.3 Visa *	Single entry	120	120
A1.4 Per diem **	29 person-days	125	3,625
A1.5 Airport transfer (home & MON)	4 transfers	25	100
A2. Local transportation (data collection, meetings, consultations)	Lump sum	1,000	1,000
A3. Report translation ^^	Lump sum	1,500	1,500
A4. Communication	2 months	125	250
Sub-Total (Compliance with ADB Requirements)			33,345
B. <u>Compliance with GOM Requirements</u>			
B.1 DEIA ^^	3 Subcenters	Lump sum	45,000
Sub-Total (Compliance with GOM Requirements)			45,000
C. Capacity Development Program			
C.1 Lectures/Seminars by external expert	2-3 days	100	300
Sub-Total (Compliance with GOM Requirements)			300
Total (EARF Implementation Per Project)			78,645
5% Contingency (USD)			3,932
Grand Total (USD)			82,577

* Applied highest among applicable (single entry) business visa applied from UK (USD 90), Australia (100 USD), & Canada (120 USD).

** Professional input of 1.25 person-months will be divided into 1.0 person-months in the field; 0.25 person-month at home office.

- ^ One consultation in a Subcenters, for 3-4 hours, including printing of hand-out material, rent of meeting room, food, and cash for 40 participants, estimated to cost USD 600. For the general consultation covering all Subcenters, assuming 25 participants in each sub-center, estimated to cost 1,500.
- ^^ Minimum of 15 USD per page, estimated total pages 100 (IEE, including EMP)

APPENDIX 12. Outline of an ADB Environmental Impact Assessment Report

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(Refer to Project 1 IEE as model for IEE under the Program.)

This outline is part of the Safeguard Requirements 1 of ADB's SPS 2009. An environmental assessment report is required for all environment category A and B projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks. A typical EIA report (for category A) contains the following major elements, and an IEE (for category B) may have a narrower scope depending on the nature of the project. The substantive aspects of this outline will guide the preparation of environmental impact assessment reports, although not necessarily in the order shown.

A. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

Suggested structure of the Chapter:

- (i) Project Introduction and Purpose*
- (ii) Description of the Environment*
- (iii) Alternatives*
- (iv) Project Categorization and Environmental Risk*
- (v) Environmental Impacts and Mitigation During Construction*
- (vi) Environmental Impacts and Mitigation During Operation*
- (vii) Public Consultation and Grievance Redress Mechanism (GRM)*
- (viii) Environmental Management and Monitoring Plan*
- (ix) Conclusion*

B. Introduction

The introduction provides an overview of the big picture from the national and municipal level. It describes the project background, the reasons and needs for having the project, the present status of infrastructure related to the project in a provincial setting, and highlights of benefits. It presents the project's environmental categorization by ADB and MNET, and the status of approval of environmental impact assessments. It also describes the structure of the IEE/EIA.

Suggested structure of the Chapter:

- (i) Introduction and Purpose*
- (ii) Environmental Categorization, ADB and MON approval of IEE/EIA*
- (iii) Structure of the IEE/EIA Report*

C. Policy, Legal and Administrative Framework

This section discusses the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project-relevant international environmental agreements to which the country is a party.

Suggested structure of the Chapter:

- (i) Mongolia's Environmental Policy*

¹⁹ Source: Annex 1 of Appendix 1. Safeguard Requirements 1: Environment. Safeguard Policy Statement. 2009. ADB.

- (ii) *Environmental Impact Assessment Requirements (ADB and MON)*

D. Description of the Project

This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, quarries and borrow pits, and spoil disposal). It reviews the environment performance of preceding tranche(s), and suggests corrective actions. It normally includes drawings and maps showing the project's layout and components, the project site, and the project's area of influence.

Suggested structure of the Chapter:

- (i) *Justification and Rationale*
 - a. *Development needs addressed by the project*
 - b. *Objective and Approach of the Project Investment Program*
 - c. *Review of environment performance of preceding tranche(s)*
- (ii) *Project Components and Subcomponents under Project [2/3]*
 - a. *Component A*
 - b. *Component B*
 - c. *Component C*
 - d. *Component X*
 - e. *Associated facilities*
- (iii) *Project's Area of Influence*

E. Description of the Environment (Baseline Data)

This section describes relevant physical, biological, and socioeconomic conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

Suggested structure of the Chapter:

- (i) *Geography, Topography and Geology*
- (ii) *Meteorology and Climate*
- (iii) *Hydrology, Surface Water Quality*
- (iv) *Air Quality*
- (v) *Noise*
- (vi) *Climate Change*
- (vii) *Natural disasters*
- (viii) *Ecological Resources*
- (ix) *Physical Cultural Resources*
- (x) *Socio-Economic Situation*
- (xi) *Land Use, Urban Development Master Plan*

F. Analysis of Alternatives

This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under

local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement. An alternative analysis is required for Cat. A projects, and is recommended for Cat. B projects, especially the comparison of with- and without project alternatives.

Suggested structure of the Chapter:

- (i) With and Without Project Alternatives*
- (ii) Alternatives related to Project Design*
 - a. Alternative 1 (e.g. road alignment)*
 - b. Alternative 2 (e.g. type of BRT system)*
 - c. Alternative 3*
 - d. Alternative x*

G. Anticipated Environmental Impacts and Mitigation Measures

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media [SPS 2009, Appendix 2, para. 6]), and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, trans boundary, and cumulative impacts as appropriate.

Suggested structure of the chapter:

- (i) Positive Impact and Environmental Benefits*
- (ii) Screening of Potential Impacts*
- (iii) Impacts and Mitigation Measures Associated with Project Location, Planning and Design*
- (iv) Environmental Impacts and Mitigation Measures during Construction*
- (v) Environmental Impacts and Mitigation Measures during Operation*
- (vi) Induced and Cumulative Impacts*
- (vii) Unanticipated Impacts during Construction and Operation*

H. Information Disclosure, Consultation, and Participation

This section (i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders; (ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and (iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

Suggested structure of the chapter:

- (i) Public Consultations during Project Preparation*
 - a. Consultation of government officials, experts and NGOs*
 - b. First round of public consultation*

- c. *Second round of public consultation*
- d. *Third round of public consultation (if relevant)*
- (ii) *Future Public Consultation Program*
- (iii) *Information Disclosure*

I. Grievance Redress Mechanism

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

Suggested structure of the chapter:

- (i) *Current Practice in Mongolia*
- (ii) *Grievance Redress Mechanism established for the Project*
- (iii) *Types of Grievances Received during project implementation*
- (iv) *Types of Grievances Expected during Project 2/3 and Eligibility Assessment*
- (v) *GRM Steps and Timeframe*

J. Economic Assessment

This section presents (i) the total project cost for the proposed project tranche; and (ii) the environmental management costs of the proposed project tranche, including cost estimates for training, institutional strengthening and awareness raising; mitigation and protection measures during design, construction and operation; and supervision, monitoring and reporting.

K. Environmental Management Plan

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

- (i) Mitigation:
 - (a) Identifies and summarizes anticipated significant adverse environmental impacts and risks;
 - (b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and
 - (c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.
- (ii) Monitoring:
 - (a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and

- (b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

(iii) Implementation arrangements:

- (a) specifies the implementation schedule showing phasing and coordination with overall project implementation;
- (b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and
- (c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.

- (iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

Suggested structure of the chapter:

- (i) *Objective and Structure*
- (ii) *Implementing Organizations and Their Responsibilities*
- (iii) *Summary of Potential Impacts and Mitigation Measures*
- (iv) *Environmental Monitoring and Inspection*
- (v) *Institutional Strengthening and Training*
- (vi) *Environmental Reporting*
- (vii) *Mechanisms for Feedback and Adjustment*

L. Conclusion and Recommendation

This section provides the conclusions drawn from the assessment and provides recommendations. It also identifies residual risks and required project assurances.

Suggested structure of the chapter:

- (i) *Project Risks and Assurances*
- (ii) *Major Environmental Impacts and Mitigation Measures*
- (iii) *Overall Conclusion*

APPENDICES

APPENDIX 13. Proposed Format for Attendance Sheet and Notes of Consultation

Ulaanbaatar Urban Services and Ger Areas Development Investment Program – Project X

ADB Loan No.XXXX

Attendance Sheet

Date	
Location	Meeting Room, Office of Khoroo XX, District XX (or, Meeting Room of the PMO)
Consulted Group	Affected residents (or Business Owners)
Consulting Group	Joint Social & Environmental Team of the PMO

No.	Name	Address	Gender	Age	Occupation	Representation
1					Trader	Resident
2					Unemployed	NGO
3						Youth & resident
4						
5						

Ulaanbaatar Urban Services and Ger Areas Development Investment Program – Project X

ADB Loan No. XXXX

Notes of Consultations

Date	Location	Consulting Group	Consulted Group	No. of Participants			Discussion/Responses/ Outcomes
				Total	F	M	
8/17/12	Meeting Room, PMO Office	Social & Environmental Team of the PMO	Business Owners	20	8	12	<ul style="list-style-type: none"> Objective/s of the consultation, such as: <ul style="list-style-type: none"> - present the program and subprojects - discuss potential environmental & social issues, concerns, impacts Responses, such as: <ul style="list-style-type: none"> - More positive than negative response/reactions on the program/subprojects, some good recommendations raised. Outcomes, such as <ul style="list-style-type: none"> - Built awareness on the program and potential impacts and benefits - Active participation in discussion and raising their views - Elicited their willingness to participate in environmental monitoring

APPENDIX 14. Grievance Registration Form

Project Management Office – Ulaanbaatar Urban Services Ger area Development Investment Programme

The Project Management Office (PMO) welcomes complaints, suggestions, comments and queries from the public regarding the implementation of its projects. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback

.Should you choose to include your personal details but want to remain confidential, please inform us by writing/typing “(CONFIDENTIAL)” beside your name.

The PMO also respects your preference to remain anonymous. We will still address your concerns and/or conduct investigations, if necessary. Again, thank you very much for your support to the Project Management Office and the team.

Contact Information				
Name		Gender	<input type="radio"/> Male	<input type="radio"/> Female
Home Address		Age		
		Phone Number		
Sub Project		E-mail		
Complaint/Suggestion/Comment/Question: Please provide the details (who, what, where, and how) of your grievance below:				
How do you want us to reach you for feedback or update on your comment/grievance?				
Potion to be filed by the Project Staff				
Date Received				
Received through	<input type="radio"/> In person	<input type="radio"/> Mail	<input type="radio"/> E-mail	<input type="radio"/> Other (specify)

Name of staff who received comment/ complaint				
Position of staff member				
Type of Grievances	Type A	Type B	Type C	Type D
Remarks				
Signature of Staff member				

Update on the case

Date	Update

APPENDIX 15. Outline for the Environmental Monitoring Report

Guidelines: Following requirements of the ADB Safeguard Policy Statement (2009) and the *Operations Manual* section on safeguard policy (OM F1), borrowers/clients are required to establish and maintain procedures to monitor the status of implementation of safeguard plans and ensure progress is made toward the desired outcomes. Borrowers/Clients are required to submit the following monitoring reports for ADB review: Depending on the environmental category of the project, environmental monitoring reports will be provided by Borrowers/Clients to ADB at the following frequencies:

Project Category	Frequency of Reporting
Category A	- Semi-annually, during construction - Annually, during operation
Category B	- Annually
Highly complex & sensitive project, as deemed by ADB	- Quarterly

The level of detail and comprehensiveness of a monitoring report is commensurate with the complexity and significance of social and environmental impacts. The following structure should be followed:

1. Introduction

1.1 Report Purpose

1.2 Project Implementation Progress

2. Incorporation of Environmental Requirements into Project Contractual Arrangements

Manner by which EMP requirements are incorporated into contractual arrangements, such as with contractors or other parties.

3. EARF Review

Reports on findings of periodic review, and if applicable, the changes needed, status of update and ADB review, clearance and disclosure...

4. Summary of Environmental Mitigations and Compensation Measures Implemented

Based on EMP; may include measures related to air quality, water quality, noise quality, pollution prevention, biodiversity and natural resources, health and safety, physical cultural resources, capacity building, and others.

5. Summary of Environmental Monitoring

5.1 Compliance Inspections (if relevant)

5.1.1 Summary of Inspection Activities

5.1.2 Mitigation Compliance^a

5.1.3 Mitigation Effectiveness^b

5.2 Emission Discharge (Source) Monitoring Program (if relevant)

5.2.1 Summary of Monitoring

5.2.2 Results

5.2.3 Assessment^c

5.3 Ambient Monitoring Program (if relevant)

5.3.1 Summary of Monitoring

5.3.2 Results

5.3.3 Assessment^d

6. Key Environmental Issues

6.1 Key Issues Identified

6.2 Action Taken

6.3 Additional Action Required

7. Grievance Redress Mechanism

Reports of grievances received, valid and invalid, status of resolution, lessons learned, etc.

8. Conclusion

8.1 Overall Progress of Implementation of Environmental Management Measures^e

8.2 Problems Identified and Actions Recommended

Appendices

- 1 Site Inspection / Monitoring Reports
- 2 Ambient Monitoring Results
- 3 Photographs
- 4 Others

^a Overall compliance with mitigation implementation requirements could be described in qualitative terms or be evaluated based on a ranking system, such as the following:

- 1 Very Good (all required mitigations implemented)
- 2 Good (the majority of required mitigations implemented)
- 3 Fair (some mitigations implemented)
- 4 Poor (few mitigations implemented)
- 5 Very Poor (very few or no mitigations implemented)

Additional explanatory comments should be provided as necessary.

^b Effectiveness of mitigation implementation could be described in qualitative terms or be evaluated based on a ranking system, such as the following:

- 1 Very Good (mitigations are fully effective)
- 2 Good (mitigations are generally effective)
- 3 Fair (mitigations are partially effective)
- 4 Poor (mitigations are generally ineffective)
- 5 Very Poor (mitigations are completely ineffective)

Additional explanatory comments should be provided as necessary.

^c Discharge levels should be compared to the relevant discharge standards and/or performance indicators noted in the EMP. Any non-conformities should be highlighted for attention and follow-up. In addition, discharge levels could be compared to baseline conditions (if baseline data is available) and described in qualitative terms or be evaluated based on a ranking system, such as the following:

- 1 Very Good (overall conditions are generally improved)
- 2 Good (conditions are maintained or slightly improved)
- 3 Fair (conditions are unchanged)
- 4 Poor (conditions are moderately degraded)
- 5 Very Poor (conditions are significantly degraded)

Additional explanatory comments should be provided as necessary.

^d Ambient environmental conditions should be compared to the relevant ambient standards and/or performance indicators noted in the EMP. Any non-conformities should be highlighted for attention and follow-up. In addition, ambient environmental conditions could be compared to the baseline conditions (if baseline data is available) and described in qualitative terms or be evaluated based on a ranking system, such as the following:

- 1 Very Good (overall conditions are generally improved)
- 2 Good (conditions are maintained or slightly improved)
- 3 Fair (conditions are unchanged)
- 4 Poor (conditions are moderately degraded)
- 5 Very poor (conditions are significantly degraded)

Additional explanatory comments should be provided as necessary.

^e Overall sector environmental management progress could be described in qualitative terms or be evaluated based on a ranking system, such as the following:

- 1 Very Good
- 2 Good
- 3 Fair
- 4 Poor
- 5 Very Poor

Additional explanatory comments should be provided as necessary