Environmental Assessment and Review Framework

July 2013

Mongolia: Ulaanbaatar Urban Services and *Ger* Areas Development Investment Program (MFF)

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

CURRENCY EQUIVALENTS
(as of 15 June 2013)

Currency unit	–	Mongolian Tughrik (MNT)
MNT1.00	=	$ 0.00069
$1.00	=	MNT 1,450

ABBREVIATIONS

ADB	Asian Development Bank
AP	affected person
CSC	Citizen Service Center
DEIA	detailed environmental impact assessment
DE	Department of Environment
EIA	environmental impact assessment
EARF	environmental assessment and review framework
EMP	environmental management plan
EGDA	Environment and Green Development Agency
EMR	environmental monitoring report
GEIA	general environmental impact assessment
GoM	Government of Mongolia
GRM	grievance redress mechanism
IEE	initial environmental examination
MFF	multitranche financing facility
MEGD	Ministry of Environment and Green Development
MNT	Mongolian Tugrig
MUB	Municipality of Ulaanbaatar
PMO	Program Management Office
REA	rapid environmental assessment
SPS	Safeguard Policy Statement
SRA	Subcenter Redevelopment Authority
USD	United States Dollar
USUG	Ulaanbaatar Water and Sewerage Authority

NOTES

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

CONTENTS

Tables

I. Introduction

A. Purpose of the EARF

1. This 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. Multitranche financing facility (MFF) is the proposed financing modality for the Program to facilitate a long-term partnership between 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 EARF outlines the procedures that will be followed in the environmental assessment and review of subprojects that will be prepared after Program approval[1] 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) Municipality of Ulaanbaatar (MUB) as the executing agency and the implementing agency of the Program; (ii) Subcenter Redevelopment Authority (SRA); (iii) Ulaanbaatar Water and Sewerage Authority (USUG) as a sub-implementing agency; and (iv) the Program Management Office (PMO).

3. This EARF has been developed and agreed with MUB. 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 subsequent 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 subsequent tranches are the Borrower's documents, these documents shall be officially endorsed by MUB and submitted to ADB for review, approval and disclosure.

4. This EARF: (i) describes the Program and its tranches; (ii) explains the general anticipated environmental impacts of the tranches to be financed under the proposed Program; (iii) specifies the requirements that will be followed related to screening and categorization of sub-sequent 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 sub-sequent tranches; (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

[1] Project 1 of the MFF was categorized “B” for environment, and an Initial Environmental Examination (IEE) has been prepared, which will be approved together with the MFF. As such, this EARF shall be applied to tranches, components and subprojects to be prepared after the MFF is approved.

preparation, implementation, and progress review of safeguard documents of subsequent tranches.

5. The Framework has been translated into Mongolian and disseminated to relevant stakeholders. The Framework was disclosed on the ADB website in July 2013.

B. The Program [2]

6. The **vision** for the program is to support the MUB in establishing a network of well-developed subcenters providing jobs, housing, and economic opportunities and urban services, with low impact on the environment, in the process improving the living conditions of the residents. The program is geographically targeted with multisector interventions to upgrade priority road sections and basic urban services, invest in socioeconomic facilities, and initiate a spatial transformation of the urban fabric. This approach will create more centrality and densification, attracting private business, and enabling better mixed land uses.

7. The **road map** has been developed on the basis of five principles: (i) improved urban centrality and potential for growth, (ii) improved access to urban services, (iii) reduced pollution, (iv) improved community participation, and (v) improved urban planning and land use. The road map has four strategic objectives:

(i) **Strategic objective 1: Roads and basic urban services are expanded** within subcenters and connectivity between them is improved. This will extend basic urban services within subcenter priority roads and urban corridors to increase access and initiate a land use changes.

(ii) **Strategic objective 2: Economic and public services are increased** through investment in social and economic facilities to respond to population needs, increase urban function and centrality, and to encourage job creation.

(iii) **Strategic objective 3: Service providers become more efficient** by implementing sector reforms and operational improvements in water supply, sewerage, and heating services.

(iv) **Strategic objective 4: Institutional strengthening and capacity building** by improving planning and subcenter development; community awareness and participation in subcenter development; operations and management of service providers; and strengthened program implementation capacity.

8. **Financing modality.** The Investment Program will be implemented over 10 years and divided into three projects. An MFF is the proposed financing modality for the investment program to facilitate a long-term partnership between ADB, the government, and the MUB. The MFF will comprise three tranches and 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 the MUB through a more tailored assistance. It will also provide higher leverage to streamline the activities of other donors, the private sector, and government agencies in developing the *ger* areas. Each tranche of the MFF will be linked to institutional and policy initiatives which will allow a stronger commitment to policy reforms linked to the sustainable delivery of urban services to the *ger* areas.

[2] Source: Memorandum of Understanding (MOU) signed between ADB and MUB, signed on 11 December 2012.

9. **Impact, outcome, outputs.** The impact of the program is improved living conditions in Ulaanbaatar. Its outcome is a network of livable, competitive, and inclusive subcenters in Ulaanbaatar's *ger* areas providing economic opportunities and urban services, leading to a healthier urban environment. The program is divided into three projects (three tranches) and has four outputs: (i) roads and urban services are expanded within priority subcenters, and connectivity between them is improved; (ii) economic and public services in targeted areas are increased; (iii) service providers become more efficient; and (iv) institutional strengthening and capacity building.

10. **Project 1.** The first tranche of the MFF will support the city master plan in developing the Selbe and Bayankhoshuu subcenters.[3] The two priority areas are planned to become the main centers in the northern mid-*ger* area, aiming to deliver urban and socioeconomic services to a current combined population of over 200,000 people. The main components to be financed are:

(i) **Construction of sewerage network extension** from the nearest terminals of the existing city sewerage system: (i) 3.5 kilometers (km) collector main for Bayankhoshuu and 2.6 km for Selbe; (ii) sewerage pumping station along with 2 km of sewer pipe extension and 0.9 km of sewer pressure pipe in Selbe; and (iii) connection to the public facilities located along the road corridor and within each subcenter.

(ii) **Road and urban services network**: (i) 15 km of combined priority roads, (ii) 17.6 km of water supply, 18 km of wastewater, and 9.7 km of district heating network pipes; (ii) sidewalks, drainage, flood protection, waste collection facilities, lighting, and urban furniture; and (iii) 5 HOBs for a total capacity of 42 megawatts.

(iii) **Social and economic facilities.** Two kindergartens, 8–9 hectares (ha) of green areas and small squares; and two business incubator centers associated with two vocational training centers.

(iv) **Multi-interventions in USUG** to improve the central wastewater treatment plant and drinking water supply network, introduce local control and central operational control systems (SCADA), implement a domestic and industrial water metering program, a program for nonrevenue water, and measures to improve water quality (in cooperation with the World Health Organization).

(v) **Institutional strengthening and capacity development** to prepare (i) detailed design and construction supervision for the water supply and wastewater collection systems, municipal infrastructure, and heating services; (ii) support for community participation, awareness, and empowerment, and SME development; (iii) support capacity building and institutional strengthening for urban planning and subcenter development; (iv) support to the program management office (PMO) to strengthen program implementation capacities; and (v) implementation of institutional and regulatory reforms to improve service providers' operation and management.

11. **Project 2** will expand the coverage of similar investments within Selbe and Bayankhoshuu subcenters and in other priority subcenters mainly located in the northern part of

[3] Bayankhoshuu subcenter: Songino Khairkan District – Khoroo 9; Selbe subcenter: Sukhbaatar District – Khoroo 14 and 17.

the mid-*ger* areas. Khaniin Material and the Market Area subcenters are tentatively the main targeted areas in project 2. Bambadajaa, Buudal, Khailaast, and Chingeltei subcenters will also be considered. Specific investments include (i) 6.3 km of connection roads; (ii) extension of 7 km of road and network in Selbe and Bayankhoshuu subcenters and three HOBs for a total capacity of 58.4 megawatts, (iii) servicing 64.1 ha in priority subcenters including road improvement, water supply, sewerage, and heating; (iv) one 500-cubic-meter water supply reservoir; (v) socioeconomic facilities based on community needs, (vi) support for mechanism and facilities to improve access to job, housing and urban services;[4] (vii) support for urban development and community participation and awareness program for the targeted areas; (viii) operation and management improvement of services provider; and (ix) capacity building, institutional development, detailed engineering design, and project management.

12. **Project 3** will expand the investment coverage of projects 1 and 2 as needed and will target subcenters located in the eastern part of the city, mainly Ulyastai and Amgalan. Dari-Ekh 1 and 2 subcenters have also been identified as potential areas for project 3. Specific investments include (i) servicing 67.8 ha of the subcenters with water supply and sewer lines and heating; (ii) improvement of 16.4 km of existing roads, 8 km of new roads and one 1.5 km bridge; (iii) operation and management improvement of services provider; (iv) socioeconomic facilities based on community needs; and (v) extension of institutional strengthening, capacity building, and community awareness programs initiated in projects 2 and 3.

13. The total cost of the investment program is estimated at about $320.00 million equivalent, including taxes and duties. Project 1, inclusive of physical and price contingencies, interest, taxes and duties, and other charges is estimated to cost $104.52 million. The investment plan for the program is summarized in Table 1.

[4] Output-based or results-based incentives for the community and private sector will be further explored during projects 2 and 3.

Table 1: Tentative Investment Program
($ million)

Item				Investment Program	Project 1
A.	**Base Cost**[a]				
	1.	Expanded roads and urban services			
		1.1	Roads improvement	89.18	20.06
		1.2	Water supply system improvement	17.36	10.06
		1.3	Sewerage system improvement	21.07	12.19
		1.4	Heating service expansion	72.15	23.15
			Subtotal (1)	**199.76**	**65.46**
	2.	More efficient service providers		**13.75**	**3.75**
	3.	Increased economic and public services		**16.41**	**4.75**
	4.	Institutional strengthening and capacity development			
		4.1	Detailed engineering design and supervision	11.90	5.73
		4.2	Program management implementation support	2.18	1.05
		4.3	Subcenter development and urban planning	1.91	.92
		4.4	Community engagement	1.47	.71
		4.5	Safeguards monitoring	.50	.24
		4.6	Strengthening service providers	1.54	.74
			Subtotal (4)	**19.50**	**9.39**
			Subtotal (A)	**249.42**	**83.35**
B.	**Contingencies**				
	1.	Physical contingencies		24.37	7.86
	2.	Price contingencies		33.36	9.00
			Subtotal (B)	**57.73**	**16.86**
C.	**Financing Charges During Implementation**[b]			**12.85**	**4.31**
			Total (A+B+C)	**320.00**	**104.52**

Note: Numbers may not sum precisely because of rounding.
[a] Includes value-added tax and import duties. The taxes and duties are estimated at $16.7 million for the investment program and $6.08 million for project 1.
[b] Includes interest and commitment charges. Interest during construction on the Asian Development Bank (ADB) loans has been computed (i) at 2.0% per annum of the first tranche's loan from ADB's Special Funds resources (Asian Development Fund); and (ii) at the 5-year (corresponding to implementation period) USD fixed swap rate plus an effective contractual spread of 0.4%; and a commitment charge of 0.15% on the undisbursed portion of the first tranche's loan from ADB's ordinary capital resources.
Source: Asian Development Bank estimates.

14. The MFF will consist of three tranches to be implemented over a period of 10 years, subject to the Government's submission of related periodic financing requests, execution of the related loan and project agreements for each tranche, and fulfillment of terms and conditions and undertakings set forth in the framework financing agreement**.** The Government will make the proceeds of each tranche available to the MUB for purposes of financing projects under the MFF. It is expected that the MUB will finance the remaining cost of about $96 million equivalent, or about 30% of the total cost, including taxes and duties, resettlement, and other miscellaneous costs.

15. The Executing Agency (EA) and Implementing Agency (IA) for the Program will be the Municipality of Ulaanbaatar. Facilitation, coordination and management of subcenter redevelopment will be undertaken by the SRA. USUG will be a sub-implementing agency for the water supply and sewerage grant-funded components of the Investment Program. A Program Steering Committee (PSC) will be established comprising representatives from the MUB and national agencies. The Mayor of Ulaanbaatar will head the PSC. A Program Management Office (PMO) will be established and would be independent of the implementing agencies. Its head would report to the PSC. The PMO would provide secretariat services to the PSC.

II. Assessment of Legal Framework and Institutional Capacity

A. Legal Framework

16. 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.

1. ADB's Safeguard Policy Statement (2009)

17. 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.[5]

18. **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 transboundary 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.

[5] 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/EnvironmentalGuiidelines

(v) 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.

(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.

2. National Legislation

19. The overarching policy on environmental resources and their protection is set out in the 1992 Constitution of Mongolia. Article 6.1 states that "*the land, its subsoil, forests, water, fauna and flora and other natural resources shall be subject to the people's power and state protection*". Article 16.1.2 states that the citizens of Mongolia are guaranteed to enjoy "*the right to a* healthy *and safe environment, and to be protected against environmental pollution and ecological imbalance*". Proceeding from, and conformable to, the Constitution, the Government of Mongolia (GoM) has enacted a series of environmental laws, regulations and standards. Among these, the Law on Environmental Protection and Law on Environmental Impact Assessment provide the core framework and general procedure and guidelines on environmental assessment.

20. Passed in March 1995 and last amended in May 2012, the Law on Environmental Protection regulates "*relations between the state, citizens, economic entities and organizations in order to guarantee the human right to live in a healthy and 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.

21. The Law on Environmental Impact Assessment, passed 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*". This law sets out the general requirements and procedures for project screening and conduct of environmental assessment and review. Order No. A-2, dated 4 January 2010, of the Ministry of Environment and Green Development (MEGD) approved the Procedural Guidance for Environmental Impact Assessment, which provides: (i) guidelines on EIA document requirements and screening; (ii) methodologies for impacts and risk assessment, cumulative impact assessment and environmental health impact assessment; (iii) background information on strategic environmental assessment; (iv) other additional information about mitigation measures and significant features of different types of project; and(v) templates for the environmental protection plan and environmental monitoring plan for inclusionin the detailed environmental impact assessment reports. This Order is currently undergoing update/modification to incorporate the recent amendments in the Law on Environmental Impact Assessment.

22. Other legal environmental issuances regulating the development and operation of urban services that will be supported under the Program are presented in **Table 2**.Relevant national regulations on environmental quality and health and safety standards are listed in **Annex 1**.

Table 2: Relevant Environmental Laws in Mongolia

Law on Subsoil	1988	Regulates relations concerning the use & protection of subsoil in the interests of present and future generations.
Law on Special Protected Areas	1994 (2004)	Regulates relations concerning the use & taking of areas under special protection (natural conservation parks, natural complex areas, natural reserves & national monument areas).
Law on Land	1994 (2012)	Regulates the possession & use of land by a citizen, entity & organization, & other related issues. Articles 42/43 provide guide on removing possessed land & granting of compensation relative to removing.
Law on Environmental Protection	1995 (2012)	Regulates "relations between the state, citizens, economic entities and organizations in order to guarantee the human right to live in a healthy and 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 Air	(2012)	Regulates the protection of the atmosphere to provide environmental balance & for the sake of present & future generations. Allows government to set standard limits to emissions from all sources. Provides for the regular monitoring of air pollution, hazardous impacts & changes in small air components such as ozone and hydrogen.
Law on Forests	(2012)	Regulates relations for protection, possession, sustainable use & reproduction of the forest in Mongolia. Defines prohibited activities in protected forest zones & their regimes & conditions when undertaking allowed activities in the utilization zone forests & their regimes.
Law on Natural Plants	(2012)	Regulates the protection, proper use, & restoration of natural plants other than forest & cultivated plants.
Law on Water	(2012)	Regulates relations pertaining to the effective use, protection & restoration of water resources. Specifies regular monitoring of the levels of water resources, quality & pollution. Provides safeguards against water pollution.
Law on Plant Protection	1996 (2007)	Regulates the inhibition, protection, inspection of pasturelands & plants.
Law on Buffer Zones	1997	Regulates the determination of special protected area buffer zones & the activities. Article 9 requires the conduct of detailed environmental assessment for the establishment of water reservoirs or construction of floodwalls or dams in buffer zones for special protected areas.
Law on Environmental Impact Assessment	1998 (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 Sanitation	1998	Governs relationships concerning maintenance of sanitary conditions, defining the general requirements for sanitation in order to ensure the right of an individual to healthy & safe working & living conditions, ensuring normal sanitary conditions, & defining the rights & duties of individuals, economic entities & organizations with this respect.
Law on Protection of Cultural Heritage	2001	Regulates the collection, registration, research, classification, evaluation, preservation, protection, promotion, restoration,

		possession and usage of cultural heritage including tangible and intangible heritage.
Civil Code of Mongolia	2002	Its Article 502 stipulates the liability for damage to environment.
Law on Wastes	2012	Governs the collection, transportation, storage, & depositing in landfills of household & industrial waste, & re-using waste as a source of raw materials to eliminate hazardous impacts of household and industrial waste on public health & the environment. Undertakings that generate significant amount of wastes must dispose of the wastes in designated landfills that meet prescribed standards.
Law on Disaster Protection	2003 (2012)	Regulates matters relating to the principles & full powers of disaster protection organizations & agencies, their organization & activities, as well as the rights & duties of the State, local authorities, enterprises, entities & individuals in relation to disaster protection.
Law on soil protection and prevention from desertification	2012	Regulates matters related protection of soil deterioration, reclamation, and prevention from desertification
Law on fauna	2012	Regulates matters related protection of animals, growth and development, breeding, rational use of its resources.

(year last amended)

3. International Environmental Conventions

23. Mongolia is a party to the international environmental conventions and protocols listed in **Table 3**. It has passed 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".

Table 3: Relevant International Environmental Conventions

International Convention / Protocol	Year of Party
World Heritage Convention	1990 (a)
United Nations Framework Convention on Climate Change	1993 (r)
Kyoto Protocol	1999 (a)
Convention on Biological Diversity	1993 (r)
United Nations Convention to Combat Desertification	1996 (r)
Vienna Convention for the Protection of the Ozone Layer	1996 (a)
Montreal Protocol on Substances That Deplete the Ozone Layer	1996 (a)
Washington Convention on International Trade in Endangered Species of Wild Fauna & Flora (CITES)	1996 (a)
Basel Convention on the Control of Transboundary Movements of the Hazardous Wastes and Their Disposal	1997 (a)
Ramsar Convention on Wetlands of International Importance	1998 (e)
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	2001 (r)
Stockholm Convention on Persistent Organic Pollutants	2004 (r)

(a) Accession (e) Entry into force (r) Ratification

B. National Environmental Assessment and Review Procedure

24. Under the Law on EIA, all projects or development initiatives, whether new or renovation/expansion, are subject to general environmental impact assessment (GEIA) or environmental screening prior to implementation. The project proponent is required to submit the following for screening by the appropriate authority:

(i) project description;
(ii) technical and economic feasibility study;

(iii) working drawings; and
(iv) other relevant documents.

25. Depending on the type of project, scale of a project, or population size of project location, GEIA is conducted by the Ministry of Environment and Green Development (MEGD) or the concerned local administrative body through the Department of Environment (DE) for aimags and Environment and Green Development Agency (EGDA) for the Municipality of Ulaanbaatar. However, if a subproject is comprised of two or more activities, as in the case of a tranche under this Program, GEIA will be conducted by the MEGD. GEIA screening takes a minimum of 14 days (longer, when extension becomes necessary) and makes any of the following conclusions:

(i) the project may be implemented without conducting a detailed environmental impact assessment (DEIA);
(ii) the project may be implemented without conducting a detailed environmental impact assessment (DEIA), but pursuant to specific conditions;
(iii) the project would require a DEIA; or
(iv) the project is rejected on grounds of non-conformity with the relevant legislation, or adverse impact of the equipment and technology on the environment, or absence of the project in the land management.

26. If DEIA is required, the scope of work shall have been defined as part of the conclusion of the screening (GEIA) activity. The project proponent engages a MEGD-registered environmental consulting entity to conduct the DEIA according to the scope of work and develop the DEIA Report, which shall have the following contents: (i) environmental baseline data; (ii) project and technology alternatives; (iii) recommended measures to mitigate and eliminate potential; adverse impacts; (iv) analysis of the extent and distribution of adverse impacts and consequences; (v) risks assessment; (vi) environmental management plan to include environmental protection (mitigation) plan and environmental monitoring program; (vii) opinions and comments of affected households in the project area; (viii) if applicable, other issues regarding cultural heritage in the project area and special nature of the project; and (ix) if applicable, rehabilitation plan.

27. The DEIA is submitted to the MEGD for review, which is expected to come up with a conclusion within 18 working days (or may be extended, if necessary). The public is ensured of access to the DEIA Report for their opinion. The MEGD will approve or disapprove a DEIA based on the conclusion of the review and taking into account the public's opinion. Projects that are not approved to implement may redesign project to conform to the unmet environmental requirements, and submit a revised DEIA for a re-assessment, for public consultation and eventually for approval.

28. The GEIA for Project 1, conducted by the MEGD in last week of March 2013, has concluded that Project 1 requires the preparation of a DEIA for each subcenter. The conclusion is featured as **Annex 2**. Broadly, the GEIA conclusion has stipulated the following:

(i) items to be included in the DEIA report;
(ii) engagement of a MEGD-registered entity to conduct/prepare the DEIA;
(iii) 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;

(iv) determination of the concentration of wastewater generated, monitoring and associated costs;
(v) development of EMP and EPP;
(vi) identification of potential impacts on physical cultural resources, recommend management measures for affected ones and obtaining conclusion from a professional organization on this matter;
(vii) assessment of potential risks due to natural hazards and defining of mitigation measures;
(viii) documentation of public consultations;
(ix) 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
(x) submission of DEIA to MEGD for review and approval within Q3 of 2013.

29. The project team has initiated the preparation for the procurement of services of a MEGD-registered entity to conduct the DEIA.

C. Institutional Capacity

30. The MEGD is the lead agency for environmental management in Mongolia. It is primarily responsible for the implementation of the country's environmental policy. Its DE conducts environmental screening or GEIA of larger projects[6] and reviews and approves all DEIAs of development projects. This Department has wide experience in the environmental screening of projects in compliance with the Law on EIA. It has in-house experts and a pool of external experts for the review of submitted EIA reports for approval.

31. Under the Law on EIA, local administrative bodies conduct GEIA for projects of smaller scale[5]. At the capital city level, it is the DE of the MUB that is vested with the responsibility of conducting GEIA of projects proposed of smaller scale in Ulaanbaatar. The DE was set up in 1988 as the Department of Environment (DoE). The DoE was renamed to DE in 2005. It was merged with the Air Quality Division in 2006. In 2009, the division in charge of summer places was added to it; in 2010, the Forest Division. As such, the DE carries out a wide range of functions on the protection of the environment and the appropriate use and rehabilitation of natural resources.

32. The MUB is now in the process of establishing a PMO to be set up at the Municipality level under the General Manager of Ulaanbaatar City and in which a national environmental safeguard staff will be positioned to focus on environmental management, i.e., ensuring that the ADB-cleared EARF is followed, and EMPs implemented, effectively. SRA and USUG staff, as well as staff of concerned khoroos, will lend support to, and participate in, environmental management of activities in their respective jurisdictions. Considering the limited skills and experiences of the Program's key players, technical assistance from environmental specialists and capacity development during initial loan implementation will be needed for institutional strengthening. Capacity development will put emphasis on hands-on training by applying the EARF in the subsequent tranches and by implementing their responsibilities in EMP implementation (Section VI).

[6] Depending on the type of project, scale of a project, or population size of project location, GEIA is screened by either the MEGD or the concerned local administrative body through its DENR for aimags and DEP for the Municipality of Ulaanbaatar. Appendix 1 of the Law on EIA provides the project thresholds for GEIA by the MEGD and local administrative bodies.

III. Anticipated Environmental Impacts

33. 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.

34. The potential impacts, issues and concerns from proposed activities under the Program are presented in **Table 4**.These are drawn from the rapid environmental assessment (REA) carried out in the previous ADB TA-7951 and the IEE for tranche 1 of the Program.

35. 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.

36. 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.

37. 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 livable, productive and well-functioning peri-urban areas for overall improved living conditions in Ulaanbaatar.

Table 4: Potential Environmental Impacts, Issues, Concerns

Prior to construction 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
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 inopen 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 and road/access blocking

- 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.

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.
- 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.
- 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.

IV. Environmental Assessment for Subsequent Tranches and Subprojects

A. Environmental Criteria for Subproject Selection

38. Proposed subprojects under subsequent tranches must be in line with the approved road map of the investment program. For environmental safeguarding purposes, the environmental criteria defined in **Table 5** shall be applied when selecting subprojects and/or components to be invested under subsequent tranches of the Program.

Table 5: Environmental Criteria for Subproject Selection

A. **Subprojects that meet any one of the following criteria shall be excluded from the Program:**

All subprojects/activities that will:
- 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;
- 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 (Appendix 5 of the Safeguard Policy Statement, June 2009).

B. **Subprojects that will be planned and implemented under the Program shall meet the following criteria:**

General:
- 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 SOx, 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

39. The Program will be implemented over a ten-year period from 2013-2023 in three tranches. For Project 1, an IEE following the ADB policy has been conducted. In compliance with GOM environmental safeguard requirements, Project 1 has undergone environmental screening or GEIA. The environmental assessment and review procedure described in this section and illustrated in Figure 1 applies to subsequent tranches (Projects 2 and 3) to ensure that the environmental safeguard requirements of both the ADB and the GoM are complied with[7]:

(i) ADB procedure: (a) environmental categorization, assessment, review and approval is required for each tranche; (b) Project 1 IEE must be reviewed, approved and disclosed prior to Program appraisal; and (c) Projects 2 and 3 EIAs/IEEs must be reviewed, approved and disclosed by ADB prior to approval of subsequent tranches.

(ii) GoM procedure: (a) each tranche must undergo GEIA by the MEGD prior to implementation; and (b) if GEIA conclusion warrants a DEIA, a DEIA report shall be submitted to, and reviewed and approved by, the MEGD prior to implementation.

40. Environmental assessment for subsequent tranches will be undertaken tentatively in Year 2016/2017 (for Project 2) and Year 2018/2019 (for Project 3), during their respective feasibility study stages. MUB as the executing and implementing agency has the overall responsibility for environmental assessment of subsequent tranches.

41. 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 subcenter.

1. STEP 1: Screening and Categorization

42. **ADB 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,

[7] 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.

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 subsequent tranches) justifying their classification and why no impacts are predicted.

43. 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 **Annex 3**.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 safeguard staff. 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 subsequent tranches, 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.

44. Project 1 has been classified as Category B by ADB's RSES. Category B shall also be targeted for subsequent tranches (i.e., components potentially triggering Category A shall be avoided whenever possible).

45. **Categorization by MEGD.** 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. 24-27). As soon as sufficient information on the tranche and its components, subprojects and activities are available, GEIA by MEGD 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) technical and economic feasibility study; (iii) working drawings; and (iv) other relevant documents. The PMO will inform ADB on the classification by MEGD.

2. STEP 2: Scoping and Field Work Preparation

46. **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 subsequent tranches. 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, 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.

47. **TOR and selection of EIA institute for EIA/IEE.** 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 (**Annex 4**).

3. STEP 3: Environmental Assessment

48. The MUB, through its PMO safeguard staff, will be responsible for the environmental assessment of Projects 2 and 3. Environmental specialists from the project implementation support will be at hand to support the PMO in the conduct of the appropriate environmental assessments.

49. 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 subsequent 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.

50. The EIA/IEE report shall be prepared consistent with: (i) Appendix 1 (Safeguard Requirements 1: Environment) and Annex to Appendix 1 (Outline of an Environmental Impact Assessment Report) of ADB's SPS 2009; and (ii) the MON Law on EIA. A more detailed outline of an EIA/IEE report including scope of work for the environmental assessment is presented in **Annex 5** of this EARF. Key steps of the environment assessment process are described in Table 6. The IEE report prepared for the first tranche of the MFF shall be used as guidance (available from www.adb.org).

Table 6: Key Steps of the Environmental Assessment Process (STEP 3)

STEP 3.1: Review of environment performance of preceding tranches 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 subsequent tranches, and incorporate in the present environment assessment, if applicable. The environmental performance of preceding tranches shall be documented in the IEE/EIA.
STEP 3.2: Definition of baseline conditions 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 MEGD 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.
STEP 3.3:Prediction of environmental impacts 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.
STEP 3.4: Consultation and participation, GRM and information dissemination 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.
STEP 3.5: Preparation of environmental management plan (EMP) 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.
STEP 3.6: Define residual project risks and required project assurances 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.
STEP 3.7: Submit draft EIA/IEE report to ADB. The draft IEE/EIA report (in English) must be submitted to ADB for approval, prior to ADB's approval of the periodic financing request for Project 2 and 3, respectively (see STEP 4 below).

51. If GEIA conclusion by MEGD 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 Law on EIA (**Annex 6**); but
(ii) be based on the draft ADB EIA/IEE and its EMP; and
(iii) be conducted by a MEGD-registered environmental consulting firm that has sufficient experience in conducting environmental assessment of projects funded by international financing institutions.

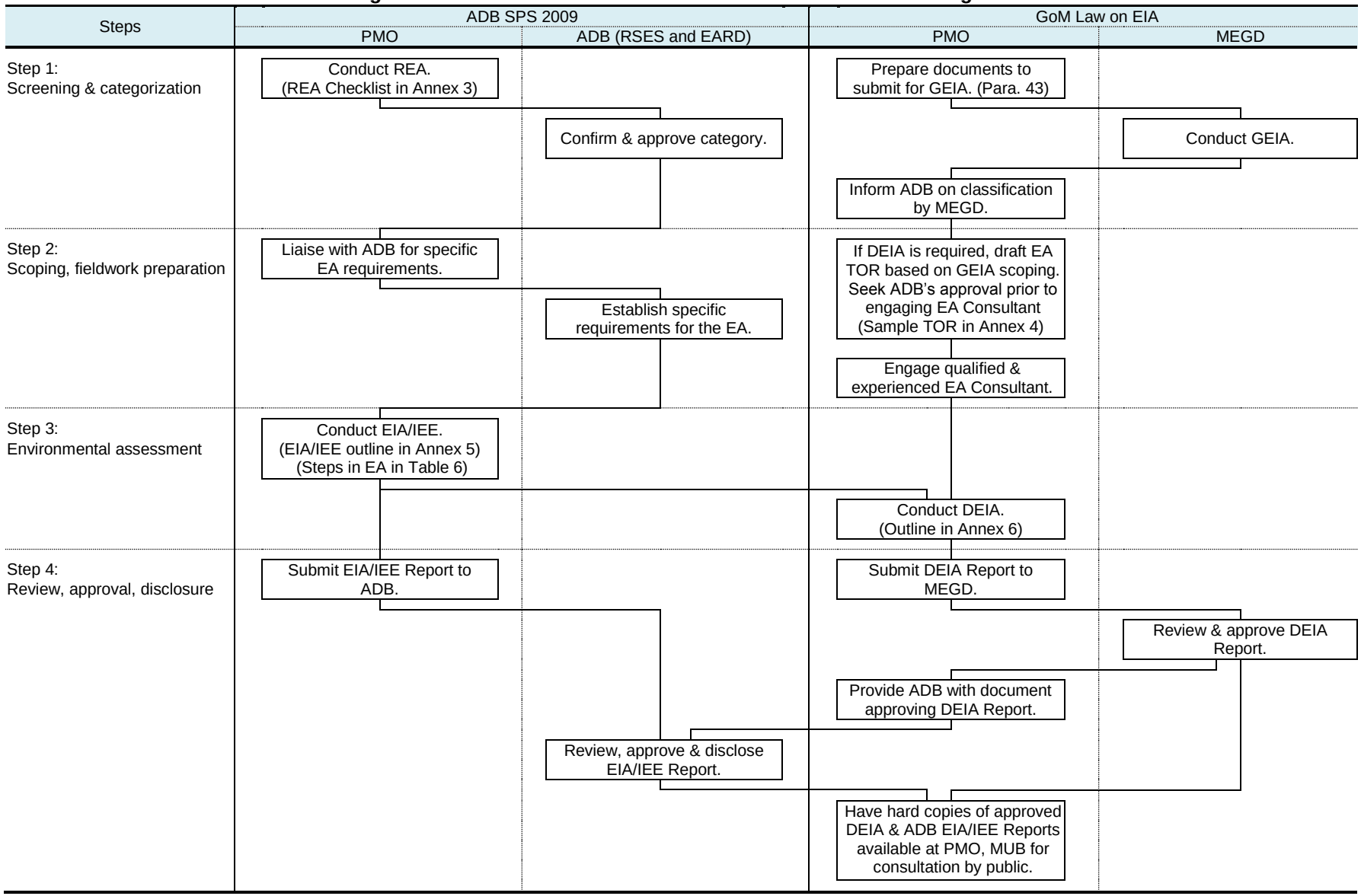
4. STEP 4: Review, Approval and Disclosure

52. **ADB.** Depending on the classification of the tranche, the following procedure shall be followed for review, approval and disclosure of the environmental assessment of subsequent tranches:

(i) Category A: (a) review and approval of draft EIA by ADB's RSES and Environment CoP; (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.

53. **MEGD.** A DEIA must be approved by MEGD 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 1: Environmental Assessment Procedure Under the Program



V. Consultation, Information Disclosure, and Grievance Redress Mechanism

A. Consultation and Information Disclosure

1. Compliance with ADB & GoM Environmental Safeguard Requirements

54. 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".*

55. Projects classified as Category A and Category B (ADB) and/or requiring a DEIA (MEGD)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 handouts shall be written, in the local language.

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

(i) For tranches classified as **Category A** by ADB, at least:
- 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
- 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** (MEGD):
- 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.

57. **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 7**) shall be included in the environmental assessment report as proof that consultation/s had been held. To comply with the MON legislation (as a 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 5**); and (ii) the opinions of affected citizens shall also be taken into account when MEGD makes the decision on the approval of the DEIA Report and granting the Project clearance/permit to implement.

58. **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.

59. As stipulated in ADB's SPS 2009, the following information will be disclosed on ADB website:

(i) For a tranche classified as environment category A, draft EIA at least 120 days before the periodic financing request for the respective Project is approved by ADB;
(ii) Final EIA upon receipt replacing the draft EIA;
(iii) For a tranche classified as environmental category B, final IEE before the periodic financing request for the respective Project is approved by ADB;
(iv) New or updated EIA or IEE reports if prepared to reflect significant changes in the project during design or implementation;
(v) Corrective action plans prepared during project implementation to address unanticipated environmental impacts and to rectify noncompliance to EMP provisions;
(vi) Final or updated EARF; and
(vii) Environmental progress reports submitted by MUB/PMO during project implementation (semi-annually for category A projects, annually for category B projects).

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

61. Hard copies of the above documents (in English and in Mongolian) will be made available for consultation at the PMO, MUB (Sukhbaatar Square 11, Ulaanbatar-46), 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 khoroos) 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 (GRM)

62. As stipulated in SPS 2009, MUB (as executing agency of the Program), must establish a mechanism to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the program's environmental performance. The grievance redress mechanism (GRM) shall address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all segments of the affected people at no costs and without retribution. The GRM shall be networked with the Citizen Service Center (CSC) of Ulaanbaatar City, a unified system of complaints/grievance resolution process.

63. The PMO's environmental safeguard staff shall oversee the implementation/observance of the mechanism. Local grievance staffs shall be designated by the subproject khoroos to serve as the counterparts of the PMO's environmental safeguard staff at the khoroo level and as one form of their participation in environmental management. Sufficient support system, i.e., communication facilities, recording, and reporting system, funds, posters declaring contact details at strategic locations, among others, shall have been set up to sustain the effective implementation of the mechanism.

64. The GRM established for Project 1 (see **Annex 8**) shall be critically reviewed and updated as needed. The PMO's environmental safeguard staffshall (i) critically review experiences of the GRM during Project 1; (ii) adapt the GRM to the subsequent tranches' specificities; (iii) disclose and discuss the proposed GRM to potentially affected people in the framework of the consultation and information disclosure process; and (iv) ensure that the updated GRM is presented in the EIA/IEE of subsequent tranches, subject to review and approval by ADB.

VI. Institutional Arrangement and Responsibilities

A. Responsibilities for EARF implementation

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

66. 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.

67. The MUB has proposed to establish a **subcenter redevelopment authority (SRA)**, a city-owned enterprise dedicated to the *ger* area subcenter 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 Subcenter 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 khoroos, communities and concerned private sector to meet environmental safeguard obligations; and (iii) firm up collaboration with subproject khoroos in consultations and information disclosure, environmental monitoring, and implementation/observance of the grievance redress mechanism.

68. 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.

69. 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.

70. 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 MEGD; (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 MEGD-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 MEGD 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.

71. 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.

72. The **MEGD** will: (i) screen the GEIAs of subsequent tranches and review and approve DEIAs accordingly; and (ii) provide advice and guidance on policy compliance/requirements, as necessary.

73. The **ADB** will: (i) review the completed REA Checklist and confirm categorization of subsequent tranches; (ii) review updated EARF, if applicable, and IEEs/EIAs of subsequent tranches 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.

74. 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.

75. 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

76. 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.

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

C. Staffing Requirement and Budget

78. 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 MEGD-registered entity to conduct DEIA; and (iv) external experts to conduct lectures/seminars under the Capacity Development Program.

79. EARF implementation for each tranche is estimated to cost: (i) USD 141,000 if tranche is Category B; or (ii) USD 195,000 if tranche is Category A. The cost requirements, shown in **Tables 8 and 9**, are based on a scenario that (i) has a Program Implementation Support Team in place during tranche preparation; and (ii) the national environmental specialist holds an MON license recognized by MEGD to conduct environmental impact assessments.

Table 7: 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 b ADB SPS 2009 c EA procedure under the Program - Harmonizing the GoM & ADB safeguard requirements	MUB-DE, USUG PMO, SRA, Concerned khoroos	Early stage of PIS	½ day c/o PIS-TA
1.2 **Some Aspects of EA Process & Environmental Management** a Meaningful consultation & information disclosure b Grievance redress mechanism c Environmentally responsible procurement d Occupational & community health and safety	MUB-DE, USUG PMO, SRA, Concerned khoroos	Early stage of PIS	½ day c/o PIS-TA
1.3 **EMP Implementation** a Implementation arrangements -Institutional responsibilities -Environmental monitoring and reporting b Emergency response c Performance indicators	MUB-DE, USUG PMO, SRA, Concerned khoroos	Early stage of PIS	½ day c/o PIS-TA
2. **By External Experts** 2.1 **Other relevant topics** 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 3,000

Note: Best practices relevant to each topic to be presented, where applicable.

Table 8: Estimated Costs for EARF Implementation per Project (Category B-IEE)

Item	Quantity	Unit Cost	Total Cost
A. PMO Staffing			
A.1 PMO Environmental Eng'r/Scientist [1]	1 person, 4 years	1,000	55,700
		Sub-Total (PMO Staffing)	**55,700**
B. Compliance with ADB requirements			
B1. International Environmental Specialist			
B1.1 Professional fee	1.25 person-months	18,000	22,500
B1.2 International travel	1 trip	4,500	4,500
B1.3 Visa *	Single entry	120	120
B1.4 Per diem **	29 person-days	125	3,625
B1.5 Airport transfer (home & MON)	4 transfers	25	100
B2. Local transportation (data collection, meetings, consultations)	Lump sum	1,000	1,000
B3. Report translation ^^	Lump sum	1,500	1,500
B4. Communication	2 months	125	250
Sub-Total (Compliance with ADB Requirements)			**33,345**
C. Compliance with GOM Requirements			
C.1 DEIA ^^^	3 subcenters	Lump sum	45,000
Sub-Total (Compliance with GOM Requirements)			**45,000**
D. Capacity Development Program			
D.1 Lectures/Seminars by external expert	2-3 days	100	300
Sub-Total (Compliance with GOM Requirements)			**300**
Total (EARF Implementation Per Project)			**134,345**
5% Contingency (USD)			6,717
Grand Total (USD)			**141,062**

1 Salary, for 4 years, starting at USD 1,000, at 10% increase annually.

* 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 subcenter, for 3-4 hours, including printing of handout material, rent of meeting room, food, 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)

^^^ Conduct by MEGD-registered firm or individual consultant. Includes public consultation, reproduction of reports, and fee for DEIA review & approval process @ USD 300.

Table 9: Estimated Costs for EARF Implementation Per Project (Category A-EIA)

Item	Quantity	Unit Cost	Total Cost
A. PMO Staffing			
A.1 PMO Environmental Eng'r/Scientist [1]	1 person, 4 years	1,000	55,700
		Sub-Total (PMO Staffing)	**55,700**
B. Compliance with ADB requirements			
B1. International Environmental Specialist			
B1.1 Professional fee	2.5 person-months	18,000	45,000
B1.2 International travel	2 trips	4,500	9,000
B1.3 Visa *	Multiple entry	310	310
B1.4 Per diem **	59 person-days	125	7,375
B1.5 Airport transfer (home & MON)	8 transfers	25	200
B2. Data collection			
B2.1 Purchase of secondary data	Lump sum	300	300
B2.2 Sampling & analyses (in case of some primary data required)	Lump sum	6,000	6,000
B3. Consultation ^	1 consultation with each of 4 subcenters & 2 general consultation with 4 subcenters altogether	600 (for each subcenter) 1,500 (general consultation)	5,400
B4. Local transportation (data collection, meetings, consultations)	Lump sum	2,000	2,000
B5. Report translation ^^	Lump sum	2,250	2,250
B6. Communication	4 months	100	400
B7. External monitor	Lump sum	6,000	6,000
		Sub-Total (Compliance with ADB Requirements)	**84,235**
C. Compliance with GOM Requirements			
C.1 DEIA ^^^	3subcenters	Lump sum	45,000
		Sub-Total (Compliance with GOM Requirements)	**45,000**
D. Capacity Development Program			
D.1 Lectures/Seminars by external expert	2-3 days	100	300
		Sub-Total (Compliance with GOM Requirements)	**300**
		Total (EARF Implementation Per Project)	**185,235**
		5% Contingency (USD)	9,262
		Grand Total (USD)	**194,497**

1 USD = 1,402 MNT

1 Salary, for 4 years, starting at USD 1,000, at 10% increase annually.

* Applied highest among applicable (multiple entry) business visa applied from UK (USD 106), Australia (310 USD), & Canada (256 USD).

** Professional input of 2.5 person-months will be divided into 2.0. person-months in the field; 0.5 person-month at home office.

^ One consultation in a subcenter, for 3-4 hours, including printing of handout material, rent of meeting room, food, 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 150 (EIA, including EMP)

^^^Conduct by MEGD-registered firm or individual consultant.Includes public consultation, reproduction of reports, and fee for DEIA review & approval process @ USD 300.

VII. Monitoring and Reporting

A. Monitoring

80. 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:
- Project 1 IEE finalization during the detailed engineering design stage;
- For subsequent 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 MEGD; (c) conducting the DEIAs, if required, and having these reviewed and approved by the MEGD.
- 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).

81. **EMP implementation monitoring.** MUB will ensure that the EMPs for subsequent tranches 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:

(i) 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;

(ii) 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.

82. 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.

83. **External monitoring verification.** For tranches likely to have significant adverse environmental impacts (category A), the borrower/client will retain qualified and experienced externalexperts 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.

84. **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

85. 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 9** 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:

(i) **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.

(ii) **Category A, operation phase:** (i) annual environmental progress and monitoring reports until the issuance of project completion report.

(iii) **Category B:** annual environmental progress and monitoring reports.

86. **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:

(i) describes corrective actions necessary to address each area of concern;
(ii) prioritizes these actions;
(iii) identifies responsibilities for implementation of each corrective action;
(iv) identifies a time-line for their implementation; and,
(v) presents a schedule for communicating the results of plan implementation to affected communities and ADB.

Annex 1.

Environmental Quality and Health and Safety Standards Relevant to the Subprojects Under the Program During Construction and Operation

Air Quality	
MNS 3384:1982	General measurement requirements
MNS-4048:1988	Gravimetric method for determination of dust concentration
MNS 0017-2-3-16:1998	Procedures for monitoring of air quality in city and settlements
MNS (ISO) 4226:2000	General aspects & units of measurements
MNS 4219:2002	Determination of sulphur content in ambient air
MNS 5365:2004	Fine size dust determination method
MNS 4585:2007	National air quality standards and parameters, applies to urban areas
Noise	
MNS 0012-1-009:1985	Standard for noise level in residential areas and civil construction
MNS OIML R 102:2001	General requirements for sampling noise
Vibration	
MNS OIML R 103:2001	General subjects and general requirements sampling
Water Quality (surface & groundwater)	
MNS 0017-1-5-15:1980	Determination method of oil products in water
MNS 3342:1982	General requirements for protection groundwater from pollution/contamination
MNS 3532:1983	Determination of lead content in surface water
MNS 4047:1988	Procedures for monitoring the quality of surface water
MNS 0899:1992	Requirements/rules for selecting water supply source & hygenicrequirements
MNS 4586:1998	Indicator of water environment quality and general requirements
MNS (ISO) 4817:1999	Determination of ammonium
MNS(ISO) 4867:1999	Recommendation for sample preparation & storage.
MNS (ISO) 4889:1999	Determination of electrical conductivity
MNS (ISO) 5667-11:2000	Guidance on groundwater sampling
MNS (ISO) 7887:2000	Determination method of water colour and its checking
MNS (ISO) 5667-2:2001	Guidance on sampling techniques
MNS (ISO) 6060: 2001	Determination of chemical oxygen demand
MNS (ISO) 9280:2001	Determination of sulphate by barium chlorine gravimetric method
MNS (ISO) 10523:2001	Determination of pH
MNS (ISO) 11923:2001	Determination of SS by filtration through glass (fibre filters)
MNS (ISO) 5667-1:2002	Guidance on the design of sampling program.
MNS (ISO) 7980:2003	Determination of Ca & Mg through atom absorption spectrometer method.
MNS (ISO) 5814:2005.	Determination of DO concentration through electric chemistry method
MNS 5790:2007	Determination of Mn concentration.
MNS 6148:2010	Permissible level for ground water polluting substances.
Drinking Water Quality	
MNS 3900:1986	Determination of taste, colour, smell and turbidity
MNS 4217:1994	Determination of total nitrate concentration
MNS 4420:1997	Determination of mercury by atomic absorption method
MNS 4423:1997	Method of measuring dry residue
MNS 900:2005	Hygienic requirements and quality control for drinking water
MNS 4430:2005	Determination of measuring iron compounds
MNS 4431:2005	Determination of nitrite concentration
Wastewater	
MNS 4943:2000	Effluent/wastewater standard.
MNS (ISO) 5667-10:2001	Guidance on wastewater sampling procedure.
MNS 5668:2006	Microbiological analysis method of waste water.
Soil	
MNS 3297:1991	Permissible level of hygenic parameters
MNS 3298:1991	General requirements for soil sampling
Occupational Health/Safety	
MNS 12.1.06:1988	General requirements for safety against extreme high noise
MNS 12.1.017:1988	Workplace noise pressure measure method.
MNS 4990:2000	Hygienic requirements in workplace environment

Annex 2.
MEGD's GEIA Conclusion for Project 1

МОНГОЛ УЛСЫН
БАЙГАЛЬ ОРЧНЫ
ХӨГЖЛИЙН ЯАМ

УЛААНБААТАР ХОТЫН
ЗАХИРАГЧИЙН АЛБАНД

Азийн хөгжлийн банкны санхүүжилтээр хэрэгжих "Улаанбаатар хотын гэр хорооллыг хөгжүүлэх, хөрөнгө оруулалтыг дэмжих хөтөлбөр"-ийн 1 дүгээр үе шатны Баянхошуу дэд төв болон Сэлбэ дэд төвийн төсөлд "Байгаль орчинд нөлөөлөх байдлын үнэлгээний тухай" хуулийн дагуу байгаль орчны нөлөөллийн ерөнхий үнэлгээ хийв.

Ерөнхий үнэлгээний дүгнэлтээр уг төвүүдийн төсөлд байгаль орчны нөлөөллийн нарийвчилсан үнэлгээ хийлгэж, Баянхошуу дэд төв болон Сэлбэ дэд төвийн нөлөөллийн нарийвчилсан үнэлгээний тайланг тус тусад нь боловсруулж ирүүлэх шаардлагатай гэж үзэв.

Ерөнхий үнэлгээний дүгнэлтийг хавсаргав.

ЕРӨНХИЙ ШИНЖЭЭЧ Д.ЭНХБАТ

2013 оны 04 дүгээр сарын 04-ний өдөр

Улаанбаатар хот

Төслийн дугаар 2013/D020

ТӨСЛИЙН ТОВЧ ТОДОРХОЙЛОЛТ

Төслийн нэр	Улаанбаатар хотын захирагчийн албанаас Азийн хөгжлийн банкны санхүүжилтээр хэрэгжих "Улаанбаатар хотын гэр хорооллыг хөгжүүлэх, хөрөнгө оруулалтыг дэмжих хөтөлбөр"-ийн 1 дүгээр үе шатны Баянхошуу дэд төв ба Сэлбэ дэд төв
Байршил	Сонгино хайрхан дүүргийн нутагт/ Баянхошуу дэд төв/ байрлах ба Сүхбаатар, Чингэлтэй дүүргүүдийн нутагт /Сэлбэ дэд төв/ байрлана.
Төсөл хэрэгжүүлэгч	Нийслэлийн захирагчийн алба, Азийн хөгжлийн банк.
Төсөл хэрэгжүүлэгчийн хаяг	15160 Улаанбаатар хот, Сүхбаатарын талбай 11 Утас:327199, факс:324331.

Төслийн хүчин чадал, товч тодорхойлолт "Улаанбаатар хотын гэр хорооллыг хөгжүүлэх,хөрөнгө оруулалтыг дэмжих хөтөлбөр"-ийн 1 дүгээр үе шатанд Баянхошуу дэд төв ба Сэлбэ дэд төвүүдийг өргөжүүлэхээр төлөвлөсөн байна. Энэ төслийн хүрээнд дүүргийн төвүүдэд усан хангамж, цэвэр бохир усны менежмент ба дүүргийн халаалт, холбогдох авто зам, явган хүний зам, гудамжны гэрэлтүүлэг, нийтийн дэд бүтэц зэргийг хамруулан шинэчилэлт хийхээр төлөвлөжээ. Баянхошуу, Сэлбэ дэд төвүүд нь Усан хангамж ба ариутгах татуургын дэд төсөл, Дүүргийн халаалтын дэд төсөл, Дэд төвийг хөгжүүлэх дэд төсөл гэсэн хэсгүүдтэй байна.

Баянхошуу дэд төв - Усан хангамжийг сайжруулах төслийн хүрээнд усан хангамжийн түгээлтийн сүлжээ, ДН 32-100мм, өндөр нягтралтай полиэтилен ӨНПЭ, 500м^3 багтаамжтай алсын дамжуулагчтай усны түвшин заагчтай шинэ усан сан/Баянхошууны одоогийн усан сангийн хажууд/, ариутгах татуургыг сайжруулах төслийн хүрээнд дотор хэсгийн ариутгах татуургын систем, 150-200мм диаметр ПЭ хоолой, Баянхошууны 250мм диаметр бүхий ариутгах татуургыг Ханын материалд байрлах хотын төвийн цэвэрлэх байгууламжийн терминалтай холбохдоо Худалдааны болон Хувьсгалчдын гудамжаар дайран өнгөрөх шинэ нөөцлүүрийг ашиглана. Дүүргийн халаалтын дэд төслийн хүрээнд халаалтын эд ангийн 15 иж бүрдэлийг шинээр суурилуулна. Дэд төвийг хөгжүүлэх дэд төслийн хүрээнд зам, 830 нэгжийг

1

Сэлбэ дэд төв - Усан хангамжийг сайжруулах төслийн хүрээнд усан хангамжийн түгээлтийн сүлжээ, ДН 32-100мм, өндөр нягтралтай полиэтилен ӨНПЭ, 500м^3 багтаамжтай алсын дамжуулагчтай усны түвшин заагчтай шинэ усан сан/Дамбадаржаад/, ариутгах татуургыг сайжруулах төслийн хүрээнд дотор хэсгийн ариутгах татуургын систем, 150-200мм диаметр ПЭ хоолойнууд, Чингэлтэй дүүргийн Хайлаастад байрлах Хотын төвийн цэвэрлэх байгууламжийн терминалтай холбох. Сэлбэ дэд төвийн зүүн урд зааг болон Сэлбэ голруу цутгах Хайлаастын голын хооронд байрладаг хамгийн зүүн хэсгийн цэвэрлэх байгууламжийг сунгах. Дүүргийн халаалтын дэд төслийн хүрээнд халаалтын зд ангийн 15 иж бүрдэлийг шинээр суурилуулна. Дэд төвийг хөгжүүлэх дэд төслийн хүрээнд зам, 825 нэгжийг халаах зуухны байр, үерийн хамгаалалтын далан, задгай талбай, 100 хүүхдийн цэцэрлэг ба 300 сурагчтай бага сургууль, BRT терминаль ба худалдааны төв, чөлөөт баг өнгрөөх газрууд зэрэг дэд бүтцийн байгууламжудыг барихаар төлөвлөжээ.

Төслийн нийт хөрөнгө оруулалт 123.6 сая ам.доллар байна. Бүтээн байгуулалтын үед 708.7 тэрбум төгрөгийн хөрөнгө оруулалт хийж, үүнийг 2 жилийн дотор нөхөх боломжтой судалгааг хийсэн байна.

ЕРӨНХИЙ ҮНЭЛГЭЭНИЙ ДҮГНЭЛТ

Улаанбаатар хотын захирагчийн албанаас Азийн хөгжлийн банкны санхүүжилтээр хэрэгжих "Улаанбаатар хотын гэр хорооллыг хөгжүүлэх, хөрөнгө оруулалтыг дэмжих хөтөлбөр"-ийн 1 дүгээр үе шатны Баянхошуу дэд төв болон Сэлбэ дэд төвийн төсөлд "Байгаль орчинд нөлөөлөх байдлын үнэлгээний тухай" хуулийн дагуу ерөнхий үнэлгээ хийсний үндсэн дээр, уг төвүүдийн төсөлд байгаль орчны нөлөөллийн нарийвчилсан үнэлгээ хийлгэж, тайланг тус тусад нь боловсруулж ирүүлэх шаардлагатай гэж үзэв.

НАРИЙВЧИЛСАН ҮНЭЛГЭЭ ХИЙЛГЭХ ҮНДЭСЛЭЛ

1. Баянхошуу дэд төв болон Сэлбэ дэд төв төслийн хүрээнд хамрагдах талбайн хэмжээнд байгаль орчны төлөв байдлын үнэлгээг хийж, тайланг тус тусад нь боловсруулах;

2. Хөрсний элэгдэл, эвдрэл, бохирдлын нарийвчилсан судалгааг хийж, төслийн барилга байгууламжуудыг барих, үгсрах явцад хөрсний элэгдэл, эвдрэлээс сэргийлэх, одоогийн байдлаар үүссэн бохирдлыг арилгах, бууруулах арга хэмжээ, түүнд шаардагдах хөрөнгө зардлыг төлөвлөж, хэрэгжилтийг хангах;

3. Баянхошуу дэд төв болон Сэлбэ дэд төв төслийн хүрээнд баригдах барилга байгууламжийн үйл ажиллагаа явуулах техник хэрэгсэл, тоног төхөөрөмж, түүний зураг төсөл, хамрах хүрээ, судалгааны болон барилгын ажлын үргэлжлэх хугацаа, технологийн дараалал, шийдлийг нарийн судалж үнэлэлт дүгнэлт өгөх;

4. Төслийн үйл ажиллагааны явцад мөрдөж ажиллах Байгаль орчныг хамгаалах төлөвлөгөө, орчны хяналт шинжилгээний хөтөлбөрийг боловсруулж, тэдгээрийг хэрэгжүүлэх хугацаа шаардагдах хөрөнгийг тооцож төлөвлөх;

2

6. Төслийн үйл ажиллагааны явцад ашиглаж байгаа болон унд ахуйд ашиглаж байгаа цэвэр ус, түүнээс гарах үйлдвэрлэлийн болон ахуйн бохир усыг, хатуу хог хаягдлыг байгаль орчин халгүйгээр шийдвэрлэх аргыг нарийвчлан тооцох;

8. Дэд бүтцийн бүтээн байгуулалтын үйл ажиллагааны явцад гарах ахуйн болон үйлдвэрлэлийн хог хаягдал болон ашиглагдаж байгаа тоног төхөөрөмж, шатах тослох материалаас гарах тусгай ангиллын хог хаягдлыг хүний эрүүл мэнд, байгаль орчинд халгүй аргаар цуглуулах, ангилан ялгах, дахин ашиглах, устгах, зайлуулах аргыг нарийвчлан тооцож, төслийн үйл ажиллагааны салшгүй нэг хэсэг болгон хог хаягдлыг эх үүсвэр дээр нь устгах хөтөлбөр, зөвлөмж боловсруулж хэрэгжүүлэх;

9. Үйл ажиллагааны явцад баримтлах хөдөлмөр хамгаалал, галын аюулгүй ажиллагааны зааварчилгааг боловсруулах, ажиллагсадын эрүүл мэнд, ажлын байрны хөдөлмөрийн эрүүл ахуйн дүгнэлтийг эрх бүхий байгууллагаар гаргуулах, тайланд дээрх арга хэмжээний талаар зөвлөмж боловсруулж тусгах;

10. Төвүүдийн дэд төвийг хөгжүүлэх дэд төслийн хүрээнд байгуулагдах замын барилгын ажилд шаардагдах карьерыг хуулиар зөвшөөрөгдсөн тусгай зөвшөөрөлтэй талбайгаас нийлүүлэх, замын төлөвлөлтийн зураг төсөлд ногоон байгууламжийн төлөвлөлтийг хийж, зам барих ажлыг гүйцэтгэх;

11. Баянхошуу дэд төв одоогоор 162 га газартай, 2114 хашаатай, Сэлбэ дэд төв 156 га газартай, 1970 хашаатай байгаа тул эдгээр хашаа бүрт байгаа нүхэн жорлонгуудын байгаа газар болон өмнө нь нүхэн жорлон байсан газрууд, ил задгай хогийн цэгүүдийн орчимд үүссэн бохирдлын судалгааг нарийвчлан хийж, хэрс, гүний усанд үүссэн нөлөөллийг хэрхэн арилгах, бууруулах талаар усан хангамж ба ариутгах татуургын төслийн хүрээнд тодорхой арга хэмжээг авч хэрэгжүүлэх;

12. Баянхошуу дэд төв болон Сэлбэ дэд төв төслийн хүрээнд төсөл хэрэгжих газарт ногоон байгууламжийг нэмэгдүүлэх талаар нарийвчилсан судалгаа хийж, төлөвлөлтийн нарийвчлисан зураг төсөлд тусган хэрэгжилтийг хангах;

13. Байгаль орчинд нөлөөлөх байдлын үнэлгээ хийлгэх талаар Нийслэлийн Засаг даргын Санхүү, эдийн засгийн асуудал эрхэлсэн орлогч Н.Батаагийн 2013 оны 03 дугаар сарын 26-ны өдрийн 2а/1032 албан бичгээр ирүүлсэн хүсэлт).

БУСАД АСУУДАЛ

1. Баянхошуу дэд төв болон Сэлбэ дэд төв төслийн үйл ажиллагаатай холбогдуулж орон нутгийн засаг захиргааны болон байгаль орчныг хяналтын байгууллагаас тавигдах нэмэлт шаардлагыг цаг тухай бүрт нь ханган биелүүлж байх;

2. Байгаль орчныг хамгаалах болон байгалийн нөөц баялгийг зохистой ашиглахтай холбогдсон хууль тогтоомжийг биелүүлэх талаар байгаль орчныг хяналтын байгууллагуудтай байнга хамтран ажиллах;

4. Ерөнхий үнэлгээнд заасан чиглэл нөхцөл болзлоос өөр үйл ажиллагаа өргөтгөл технологийн шинэчлэл хийх төслийн хүрээнд явуулах бүрт тусгай төсөл боловсруулж ерөнхий үнэлгээнд хамруулж байх.

ЕРӨНХИЙ ҮНЭЛГЭЭ ХИЙСЭН:

БОНХЯ-НЫ ШИНЖЭЭЧ С.ЭРДЭНЭЦЭЦЭГ

нарийвчилсан үнэлгээ хийх чиглэл-хуваарь

Ажлын агуулга	Хугацаа	Тайлбар
1. Төсөл хэрэгжих нутаг дэвсгэрийн байгаль орчны өнөөгийн төлөв байдлыг харуулсан дүрс бичлэг хийх фото зураг, топозураг М1:10000, авч тайланд хавсаргах. төслийн газарзүйн байрлалын зургийг 1:2000 масштабтайгаар хийж тайланд хавсаргах.	БОНБНҮний эхний үе шатанд	Мэргэжлийн байгууллага
2. Нарийвчилсан үнэлгээ хийлгэх асуудлаар эрх бүхий аж ахуйн нэгжтэй тохиролцож гэрээ байгуулах	2013 оны 4-р сард	Төсөл хэрэгжүүлэгч
3. Төсөл хэрэгжих орчны суурь нөхцөл байдал болон байгаль орчныг хамгаалах талаар авах арга хэмжээг тодорхойлох чиглэлээр дараах нэмэлт судалгааг хийж дүгнэлт гаргах. <u>А.Усны асуудлаар</u> - Баянхошуу дэд төв болон Сэлбэ дэд төвүүдийн орчимд газрын доорхи, гадаргын болон хөрсний усны нөхцөл байдал, нөөц, бохирдол хомсдлын өнөөгийн түвшиныг тодорхойлсон нарийвчилсан судалгаа хийж, мэргэжлийн дүгнэлт гаргах, ус хэрэглээний хэмжээ, эх үүсвэрийг түүнтэй уялдуулан тооцох. - Баянхошуу дэд төв болон Сэлбэ дэд төв төслийн үйл ажиллагааны явцад гарах бохир усны хэмжээ найрлагыг нарийвчлан тогтоож түүнийг байгаль орчинд халгүйгээр зайлуулах арга зам, шаардагдах хөрөнгө зардлыг төлөвлөх, - Үйл ажиллагаанаас усны нөөц горим чанарт үзүүлэх нөлөөллийг тогтоож түүнд хяналт тавих хугацаа хөрөнгө зардлыг тодорхойлох, - Усны нөөц, чанарын асуудлаар хийсэн судалгаанд тус яамны БХЗГ-аар дүгнэлт гаргуулж, ус ашиглах гэрээг холбогдох байгууллагатай байгуулж, телберийг тогтоосон хугацаанд барагдуулж байх. <u>Б. Хөрсний асуудлаар</u> - Газрын элэгдэл эвдэрлийн өнөөгийн байдал, нүхэн жорлон, ил задгай хог хаягдлаас үүссэн хөрсний бохирдлын нарийвчилсан судалгааг хийж, үүнийг арилгах, бууруулах талаар төслийн хүрээнд хэрэгжүүлэх тодорхой үндэслэл бүхий, хэрэгжиж болохуйц ажлуудыг тодорхойлох;	Нарийвчилсан үнэлгээний явцад	Мэргэжлийн байгууллага

тайланд тусгах; - Инженерийн шугам сүлжээ, авто зам болон барилга байгууламж барих үйл ажиллагаанд ашиглагдах элс, хайрга, барилгын чулуу хууль тогтоомжоор зөвшөөрөгдсөн тусгай зөвшөөрөлтэй талбайгаас нийлүүлэх. **<u>В.Агаар, цаг уурын асуудлаар</u>** -Төсөл хэрэгжих нутаг дэвсгэрийн цаг агаарын өөрчлөлтийг тодорхойлж түүнээс төслийн үйл ажиллагаанд учруулж болзошгүй сөрөг нөлөөлөл түүнийг багасгах, арилгах арга зам шаардагдах хөрөнгө зардлыг тогтоох. **<u>Г. Ой, ургамал, амьтны асуудлаар</u>** - Баянхошуу дэд төв болон Сэлбэ дэд төв ашиглах үйл ажиллагаанаас ургамал, амьтанд учруулах сөрөг нөлөөллийг тогтоож, тэдгээрийг бууруулах, арилгах арга хэмжээ шаардагдах хөрөнгө зардлыг тодорхойлох. -Төслийг хэрэгжүүлэх явцад өртөх талбайн ургамлын нэр төрөл тархалтыг тогтоох ховор болон нэн ховор ургамал байгаа эсэх талаар дүгнэлт гаргаж, хэрэв тэдгээр нь өремдлөгийн явцад өртөхөөр байвал түүнийг хамгаалах болон шилжүүлэх арга хэмжээ түүнд шаардагдах хөрөнгө зардлыг тодорхойлох. - Баянхошуу дэд төв болон Сэлбэ дэд төвүүдийн байрлах газар нутагт ногоон байгууламжийг нэмэгдүүлэх чиглэлээр нарийвчилсан төлөвлөлт хийж, хэрэгжилтийг ханган ажиллах, -Тухайн орчинд идээшин амьдарч буй ан амьтны байршилт тархалт тоо толгойг тогтоон төслийн үйл ажиллагаанаас учруулж болзошгүй сөрөг нөлөөллийг тодорхойлох.		
4. Байгаль орчныг хамгаалах төлөвлөгөө, орчны хяналт-шинжилгээний хөтөлбөр боловсруулж тэдгээрийг хэрэгжүүлэх хугацаа, хяналт хийх байршлыг тодорхойлж түүнд шаардагдах хөрөнгө зардлыг тодорхойлох	Нарийвчилсан үнэлгээний явцад	Мэргэжлийн байгууллага Төсөл хэрэгжүүлэгч
5. Төслийг хэрэгжүүлэх нийт нутаг дэвсгэрийн хэмжээнд түүх соёлын, дурсгалт зүйлс болон археологи, палеонтологийн олдворт сөргөөр нөлөөлөх, хайгуул хийх явцад илэрсэн тохиолдолд холбогдох байгууллагад шилжүүлэх, мэдэгдэх талаар зөвлөмж боловсруулах, судалгаа хийж, мэргэжлийн байгууллагаар дүгнэлт гаргуулах	Нарийвчилсан үнэлгээний явцад	Мэргэжлийн байгууллага
6. Байгалийн гамшигаас үүдэн гарч болзошгүй ослын үнэлгээ	Нарийвчилсан	Мэргэжлийн

орон нутгийн захиргааны байгууллага, иргэдийн нийтийн хурлын саналыг авч тайланд хавсаргах.	үнэлгээний явцад	байгууллага
8. Төслийн хүрээнд ашиглагдах химийн бодист эрсдэлийн үнэлгээг 2013 онд батлагдсан журам, аргачлалын дагуу хийж, түүнийг хадгалах, хэрэглэх, тээвэрлэх үеийн аюулгүй ажиллагааны талаар зөвлөмж боловсруулж тайланд хавсаргах	Нарийвчилсан үнэлгээний явцад	Мэргэжлийн байгууллага
9. "Байгаль орчинд нөлөөлөх байдлын үнэлгээний тухай" хуулийн дагуу хийсэн нарийвчилсан үнэлгээний тайланг Байгаль орчин, ногоон хөгжлийн яаманд ирүүлж шүүмж хийлгэн шийдвэр гаргуулах.	2014 оны 3-р улиралд багтаан	Төсөл хэрэгжүүлэгч Мэргэжлийн байгууллага

Заавал хэрэгжүүлэх шаардлагатай дээр дурьдсан арга хэмжээг цаг хугацаанд нь ханган биелүүлээгүй тохиолдолд ерөнхий үнэлгээний дүгнэлтийг хүчингүй болгож "Байгаль орчинд нөлөөлөх байдлын үнэлгээний тухай" хуулийн дагуу хариуцлага ноогдуулах болно.

Ерөнхий үнэлгээний дүгнэлт, нарийвчилсан үнэлгээний чиглэл хуваарийг тогтоосон:

БАЙГАЛЬ ОРЧИН, НОГООН ХӨГЖЛИЙН ЯАМНЫ ШИНЖЭЭЧ С. ЭРДЭНЭЦЭЦЭГ

Ерөнхий үнэлгээний дүгнэлт, түүний чиглэл, хуваарийг зөвшөөрч, хэрэгжүүлэх үүрэг авсан:

НИЙСЛЭЛИЙН ЗАСАГ ДАРГЫН САНХҮҮ, ЭДИЙН ЗАСГИЙН АСУУДАЛ ЭРХЭЛСЭН ОРЛОГЧ ДАРГА Н.БАТАА

7

ANNEX 2

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: MUB

According to the law on Environmental Impact Assessment the General Environmental Impact Assessment GEIA was developed for Bayankhoshuu and Selbe sub-center'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 sub-centers, 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

ANNEX 2

MINISTRY OF NATURE ENVIRONMENT AND GREEN DEVELOPMENT

CONCLUSION ON GENERAL ENVIRONMENTAL IMPACT ASSESSMENT

4 April 2013 Ulaanbaatar
Project No.: 2013/D020

Project Description

Project name: Bayankhoshuu and Selbe Sub-center's Sub-projects Project 1 of Urban Services and Ger Areas Development Investment Program USGDIP, Asian Development Bank ADB TA7970-MON

Location: Bayankhoshuu Sub-center in Songino-khairkhan District and Selbe Sub-center in Sukhbaatar and Chingeltei Districts

Project Proponent: Municipality of Ulaanbaatar

Proponent Address: Ulaanbaatar-15160, Sukhbaatar Square 11, Phone: 327199, Fax: 324331

Project Capacity, Brief Description:

In Project 1 of Urban Services and Ger Areas Development Investment Program (USGDIP), Bayankhoshuu and Selbe Sub-centers shall be expanded/redeveloped. Within the project renovation of these sub-centers' water supply, waste water management, district's heating, associated roads, walk paths, street lightings, public infrastructure is planned to cover. This project has water supply and sewerage sub-project; district's heating sub-project; and sub- sub-centers development sub-project.

Bayankhoshuu Sub-center

Within the water supply improvement the distribution network shall include DN 100 to 32 mm High Density Poly ethylene (HDPE) pipes and newly constructed water reservoir with 500 m^2 capacity and automatic level measurement tool (near existing Bayankhoshuu reservoir).

For household connections polyurethane pre-insulated pipes consisting of 150-200 mm diameter Polyethylene (PE) internal carrier and external PE jacket are prescribed. The 250 mm sewer collector at Bayankhoshuu shall be connected to the city central treatment facility terminal that located in Khani Material (local name) through new reservoir crossing Khudaldaa and Khuvsgalchid Streets.

During the district's heating sub-project 15 heating only boilers shall be installed.

Sub-centers development sub-project shall cover road, 830 units technical rooms, embankments for flood protection, open areas, bus stops, khoroo service facilities, market, multi-purposes construction, and 230 kids capacity kindergarten.

Selbe Sub-center

Within water supply improvement the distribution network shall include DN 100 to 32 mm High Density Poly ethylene (HDPE) pipes and newly constructed water reservoir at Dambadarjaa with 500 m^2 capacity and automatic level measurement tool.

For household connections polyurethane pre-insulated pipes consisting of 150-200 mm diameter Polyethylene (PE) internal carrier and external PE jacket are prescribed. The 250 mm sewer collector at Khailaast, Chingeltei District shall be connected to the city central treatment facility terminal. It is planned to extent the most east pump station located between southern boundary of Selbe sub-center and discharge point of Khailaast river into Selbe river.

During the district's heating sub-project 15 heating only boilers shall be installed.

Sub-centers development sub-project shall cover road, 825 units technical rooms, dams for flood protection, open areas, 100 kids capacity kindergarten and 300 pupils capacity preliminary school, BRT terminal and marketing center, leisure and infrastructure facilities.
Total investment is 123.6 million US$. During construction period 708.7 trillion MNT will spend and it will to recover for 2 years.

General Assessment Conclusion

According to the law on EIA, GEIA was developed for Bayankhoshuu and Selbe sub-center's sub-projects, Project 1 of Urban Services and Ger Areas Development Investment Program USGDIP, Asian Development Bank ADB TA7970-MON and it is required to send back DEIAs for both Bayankhoshuu and Selbe sub-center separately.

Justification for DEIA

1. To develop DEIA separately for both Bayankhoshuu and Selbe sub-centers;
2. To ensure the implementation of and to plan of the required investments for detail investigation soil erosion and its contamination, prevention of erosion and destruction during construction period of project, mitigation measures for existing soil contaminations;
3. To assess in detail the equipments, drawings, frameworks, duration of investigation and construction works, technological priority, and solutions;
4. To develop Environmental Protection Plan EPP and Environmental Monitoring Program EMP for project activities and to plan the required investment for EPP and EMP.
5. To define the water sources and to determine the water demands for constructions of Bayankhoshuu and Selbe sub-centers and contractors' fresh water during their activities.
6. Domestic and industrial solid wastes that produce during infrastructure construction and special remains from equipments maintains, fuel and other lubricants should be classified, collected, and without any harm to human bodies and environment re-used, disposed and transported. For that purposes all wastes are quantified for cost planning as one of the most important issues during project construction and implementation period and waste disposal program and recommendation shall be developed to be they disposed at the sources' areas;

7. To develop and follow up a labor safety measures and fire combat activity procedures, to get conclusion from authority organization on employees health, workplace hygiene, and report shall include measures for these issues and recommendations;
8. To transport a construction materials as sand, gravels, others for road from licensed quarry companies, to include a green facilities in road design and plans and drawings, and to implement a road construction as properly;
9. Byankhoshuu sub-center has covered 162 ha areas on which 2114 plots and Selbe sub-center also has 156 area and 1970 plots. These many years used areas have new and old dogged holes for toilets and polluted water holes and exposed waste remains points. To clear these areas from pollution it is important to do additional study for their neutralizations and within the sewerage system sub-project the pollutions in groundwater and soil contaminations must be treated or taken mitigation measures to reduce;
10. To study, improve, add, develop and implement a green facilities on project operating and implementing areas of Bayankhoshuu and Selbe sub-centers and include in drawings in detail and follow up in real life;
11. To implement the requests of 2a/1032 official letter issued on 26 March 2013 by Bataa.N, Deputy Governor of Finance and Economic Affairs of Ulaanbaatar City Governor for GEIA development.

Other Issues

1. To follow up a requests from local administration and environmental monitoring and controlling organizations and experts related project activities on these 2 sub-centers;
2. To cooperate with environmental monitoring and controlling organization and experts for proper and rational use of environment and natural resources and follow up related laws and other regulations in time;
3. To conduct revise and to get conclusion and solution on both DEIA reports for Bayankhoshuu and Selbe sub-centers separately;
4. To develop new project and to cover new GEIA if these projects will expand its activities or provide new technology other than that conditions and terms and schedules were included in this GEIA.

GEIA developed:
Expert of MEGDErdenetsetseg.S

MINISTRY OF ENVIRONMENT AND GREEN DEVELOPMENT ULAANBAATAR

ANNEX 2

Directive-schedule for DEIA

Items	Time	Comment
1.To include in DEIA report the recent view of proposed project areas using video, camera and topographic map of M1:10000 scale and geographic map of 1:2000	During DEIA process	Authority Institute
2. To sign agreement with DEIA produced authority institute	April 2013	Project proponent
3. To conduct additional investigations, to get conclusion and to determine measures for environmental baseline study and protection of environment: **A. Water related issues** -To conduct detail investigation to determine recent condition and quality/level of surface and underground waters, its resources and pollutions, to carry out professional conclusion, and to define the water demand with its sources - To determine the concentration of waste water that produce proposed project activity, to find nature-friendly measures to disposal and to plan cost for the waste water treatment - To define the water resources regime and quality affected from this project and to monitor this issue and to calculate the expenditure. - To get conclusion on study results on water resources and its quality from Environmental Audit Department of MEGD , to contract agreement with water authority and to do payment in time for water use **B. Soil related issues** - To conduct detail investigation on recent condition of soil erosion, toilet holes, exposed waste remains, and their impact on environment and to define applicable mitigation measures with certain justifications to reduce the contaminations in soils during project implementation - To plan expenditure for reclamation and recovering the disturbed areas during construction period and engineering facilities of the project and to include in report - To use the construction materials for road, engineering facilities and infrastructure from licensed areas that permitted in law and related regulations to get for quarries **C. Air, weather related issues** -To monitor the weather fluctuations at proposed project area, to reduce some impacts from the project using mitigation measures and to plan expenditure for these purposes **D. Forest, plant, animal related issues** -To define the negative impacts on plant and animals within the project areas, to reduce negative impacts on them and to plan expenditure for protection measures - To conclude the plants and their names list, rare plants existing or not, to replace or protect if there would be drilling or blasting and to plan expenditure	During DEIA process	Authority Institute

- To develop detailed plan for additional green facilities in Bayankhoshuu and Selbe sub-centers and to implement their proposals to be in performance -To determine the heat of animals habituated in project areas and to define the negative impact on them		
4.To develop EMP and EPP, their implementation period, monitoring and control and their locations and to plan expenditure for this issue	During DEIA process	Authority Institute
5.To define the negative impacts on historical, memorial, archaeological and paleontological findings, to inform and transfer defined findings during implementation period to related organizations and to develop recommendation on this matter and to get conclusion from professional organization	During DEIA process	Authority Institute
6.To assess the possible risks due to natural disasters and to define the mitigation measures and to include this matter in report	During DEIA process	Authority Institute
7.To attach the local communities and administration suggestions and thinks at meeting and discussions in each DEIA report	During DEIA process	Authority Institute
8. To develop the risk assessment of chemicals used in the project according to the new procedure and rules approved in 2013 and do recommendations for safety activities during store, use, transportation and to attach in DEIA report	During DEIA process	Authority Institute
9.To submit the DEIAs to MEGD for review and approval according to the law on EIA	Within 3 quartile of 2013	Authority Institute Project proponent

Above mentioned items are to be performance. If these items not implemented in time, according to the law on EIA the GEIA shall be expired and proponent shall brush with the law.

Defined the GEIA conclusion and directive-schedule for DEIA:

Expert of MEGD Erdenetsetseg.S

Responsible person for agreement to implement the directives, schedules and GEIA conclusion

Deputy Governor of Finance and Economy Affiars of Capital City Major Bataa.N

Annex 3.
Rapid Environmental Assessment (REA) Checklist

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			
• Bay			
B. Potential Environmental Impacts Will the Project cause…			
▪ impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services.			

Screening Questions	Yes	No	Remarks
▪ 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?			
▪ degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watersheds and forests)?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable group?			
▪ degradation of cultural property, and loss of cultural heritage and tourism revenues?			
▪ 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?			
▪ water resource problems (e.g. depletion/degradation of available water supply, deterioration for surface and ground water quality , and pollution of receiving waters?			
▪ air pollution due to urban emissions?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical and biological hazards during project construction and operation?			
▪ road blocking and temporary flooding due to land excavation during rainy season?			
▪ noise and dust from construction activities?			
▪ 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?			

Screening Questions	Yes	No	Remarks
▪ 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?			

Climate Change and Disaster Risk Questions The following questions are not for environmental categorization. They are included in this checklist to help identify potential climate and disaster risks.	Yes	No	Remarks
• Is the Project area subject to hazards such as earthquakes, floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and climate changes (see Appendix I)?			
▪ Could changes in temperature, precipitation, or extreme events patterns over the Project lifespan affect technical or financial sustainability (e.g., increased extreme rainfall increases flooding, damaging proposed infrastructure)?			
▪ Are there any demographic or socio-economic aspects of the Project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, ethnic minorities, women or children)?			
▪ Could the Project potentially increase the climate or disaster vulnerability of the surrounding area (e.g., by paving vulnerable groundwater recharge areas, or using water from a vulnerable source that is relied upon by many user groups, or encouraging settlement in earthquake zones)?			

* Hazards are potentially damaging physical events.

Appendix I: Environments, Hazards and Climate Changes

Environment	Natural Hazards and Climate Change	Example Impact on Urban Development
Arid/Semi-arid and desertenvironment	Low erratic rainfall of up to 500 mm rainfall per annum with periodic droughts and high rainfall variability. Low vegetative cover. Resilient ecosystems & complex pastoral and systems, but medium certainty that 10–20% of dry lands degraded; 10-30% projected decrease in water availability in next 40 years; projected increase in drought duration and severity under climate change. Increased mobilization of sand dunes and other soils as vegetation cover declines; likely overall decrease in agricultural productivity, with rain-fed agriculture yield reduced by 30% or more by 2020. Earthquakes and other geophysical hazards may also occur in these environments.	Encroachment of sand dunes into urban areas; increased dust and respiratory diseases in peri-urban areas; water and energy shortages in urban areas due to reduced rainfall
Humid and sub-humid plains, foothills and hill country	More than 500 mm precipitation/yr. Resilient ecosystems & complex human pastoral and cropping systems. 10-30% projected decrease in water availability in next 40 years; projected increase in droughts, heat waves and floods; increased erosion of loess-mantled landscapes by wind and water; increased gully erosion; landslides likely on steeper slopes. Likely overall decrease in agricultural productivity & compromised food production from variability, with rain-fed agriculture yield reduced by 30% or more by 2020. Increased incidence of forest and agriculture-based insect infestations. Earthquakes and other geophysical hazards may also occur in these environments.	Increases in the intensity of precipitation and floods inundate transport infrastructure causing disruptions in traffic and economic activity; increased food insecurityin urban areas as production levels fall and prices rise
River valleys/ deltas and estuaries and other low-lying coastal areas	River basins, deltas and estuaries in low-lying areas are vulnerable to riverine floods, storm surges associated with tropical cyclones/typhoons and sea level rise; natural (and human-induced) subsidence resulting from sediment compaction and ground water extraction; liquefaction of soft sediments as result of earthquake ground shaking. Tsunami possible/likely on some coasts. Lowland agri-business and subsistence farming in these regions at significant risk.	Ground subsidence damages and disrupts services such as water supply and sanitation, energy and transport; increases in the intensity of floods can erode solid waste landfills which can result in the contamination of water resources
Small islands	Small islands generally have land areas of less than 10,000km^2 in area, though Papua New Guinea and Timor with much larger land areas are commonly included in lists of small island developing states. Low-lying islands are especially vulnerable to storm surge, tsunami and sea-level rise and, frequently, coastal erosion, with coral reefs threatened by ocean warming in some areas. Sea level rise is likely to threaten the limited ground water resources. High islands often experience high rainfall intensities, frequent landslides and tectonic environments in which landslides and earthquakes are not uncommon with (occasional) volcanic eruptions. Small islands may have low adaptive capacity and high adaptation costs relative to GDP.	Sea-level rise and storms increase threats to economic growth and populations which are concentrated along coastlines; reduced land availability for urban expansion; damage to port and tourism facilities from sea-level rise, storms and floods.
Mountain ecosystems	Accelerated glacial melting, rock-falls/landslides and glacial lake outburst floods, leading to increased debris flows, river bank erosion and floods and more extensive outwash plains and, possibly, more frequent wind erosion in inter-montane valleys. Enhanced snow melt and fluctuating stream flows may produce seasonal floods and droughts. Melting of permafrost in some environments. Faunal and floral species migration. Earthquakes, landslides and other geophysical hazards may also occur in these environments.	Human insecurity resulting from glacial lake outbursts and landslides; Reduced income from tourism activities as snow patterns change
Volcanic environments	Recently active volcanoes (erupted in last 10,000 years – see =-kl[‘. Often fertile soils with intensive agriculture and landslides on steep slopes. Subject to earthquakes and volcanic eruptions including pyroclastic flows and mudflows/lahars and/or gas emissions and occasionally widespread ashfall.	Damage to infrastructure, loss of life and livelihoods due to natural disasters

Annex 4.
Terms of Reference for IEE/EIA/DEIA Consultants

A. 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 subsequent Project 2 (or 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).

B. 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 (MEGD), in compliance with the Mongolian Law on Environmental Impact Assessment (1998, last amended in 2012). Obtain an environmental impact clearance certificate (or equivalent) from MEGD.

(vi) If needed, prepare detail EIA (DEIA) which fully responds to the conclusion of the GEIA issued by MEGD, and get approval of DEIA(s) by MEGD.

(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. Staffing and Qualifications

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 MEGD 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 subcenter for MEGD approval.

E. Reporting Arrangement

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 MEGD for GEIA, as soon as the required supporting documents are sufficiently available for MEGD'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.	**Compliance with ADB requirements**			
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.	**Compliance with GOM Requirements**			
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 subcenter, for 3-4 hours, including printing of handout material, rent of meeting room, food, 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)

Annex 5.
Outline of an ADB Environmental Impact Assessment Report[8]
(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
(ii) Environmental Impact Assessment Requirements (ADB and MON)

[8] Source: Annex 1 of Appendix 1. Safeguard Requirements 1: Environment. Safeguard Policy Statement. 2009. ADB.

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, transboundary, 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 Project 1 of the Project
(iii) Types of Grievances Received during Project 1
(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

Annex 6.
Contents of a GoM Detailed Environmental Impact Assessment Report[9]

1. Environmental baseline data and indices
2. Description of the Project and alternatives
3. Recommended measures to mitigate and eliminate potential significant adverse impacts
4. Analysis and calculation of the extent and distribution of adverse impacts and consequences
5. Accidents and risks assessment
6. Environmental management plan
7. Addressed opinions and comments of citizens and presidiums of soum and district citizen's representatives khurals of the area of the project implementation
8. Other issues regarding cultural heritage in the project area and special nature of the project

[9] Law on Environmental Impact Assessment. 1998. Revised 2001, 2006 and 2012.

Annex 7.
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	• Objective/s of the consultation, such as: - present the program and subprojects - discuss potential environmental & social issues, concerns, impacts • Responses, such as: - More positive than negative response/reactions on the program/subprojects, some good recommendations raised. • Outcomes, such as - 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

Annex 8.
Grievance Redress Mechanism (as defined for Project 1)

The Grievance Redress Mechanism (GRM) is meant for persons seeking satisfactory resolution to their complaints on the environmental performance of the subprojects under Project 1 of the Program. Any person who has complaint regarding the environmental performance of the subproject during construction and operation phases shall have access to the mechanism free of charge. Grievances raised on environmental impacts are critical to the health, wellness and safety of affected persons (APs). Hence, the proposed mechanism attempts to be most easily accessible and most responsive to APs' complaints. The mechanism intended to integrate/network with centralized system of complaints and grievance resolution process of Ulaanbaatar, i.e., the Citizen Service Center. (Figure 8.1)

The PMO's environmental safeguard staff shall oversee the implementation/ observance of the mechanism. Local grievance staffs shall be designated by the subproject khoroos to serve as the counterparts of the PMO's environmental safeguard staff at the khoroo level and as one form of their participation in environmental management. Sufficient support system, i.e., communication facilities, recording, and reporting system, funds, posters declaring contact details at strategic locations, among others, shall have been set up to sustain the effective implementation of the mechanism. Contractors and operators will be required to designate their respective counterpart grievance staff.

Stage 1 (informal): First, APs can lodge complaints directly to the Contractor during construction or Operator during operation. Contractor/Operator shall assess the complaint immediately and act on the complaint within three days from receipt of complaint.

Stage 2 (formal): If assessment reveals the issue as not associated with the Subproject's environmental performance, the Contractor/Operator shall direct AP to the City's Citizen Service Center (CSC). If it is associated with the subproject's environmental performance but is not acted on within three days from receipt of complaint, or if AP is not satisfied with the resolution undertaken by the Contractor/Operator, he/she can access the stage 2, as follows:

Step 1 (Day 1)
AP lodges complaint at the access points of the PMO or Khoroo Office.

Step 2 (Day 1)
PMO/Khoroo Office documents/registers lodged complaint, makes sure these are duly referenced and provides AP with a copy of referenced complaint. If lodged at the khoroo level, local grievance staff contacts the PMO immediately to inform about the lodged complaint.

Step 3 (Day 2/Day 3)
AP shall immediately be informed if the grievance is within, or outside, the purview of the mechanism.

- If it is outside the purview of the mechanism, AP shall be directed to the CSC.
- If complaint is covered by the mechanism, the AP shall be informed of the expected action timelines as set out in the established mechanism. If both of the AP and Contractor/Operator are available, the complaint shall be immediately reviewed, investigated and discussed. If not, both parties should agree to undertake the review, investigation and discussion within 3days. The discussion will center on the cause and action/measure to implement based on the review

and investigation. Agreement on actions and measures and time involved shall be made with the AP. Agreement shall be properly documented and filed; PMO, concerned Khoroo Office and AP shall have copies.

Step 4
Implement the agreed on action/resolution.

- (Day 3/Day 4) If complaint is minor, i.e., not requiring further investigation and would be easy to resolve, the Contractor/Operator shall immediately implement agreed on action/resolution.
- (Day 3/Day 4 to Day 6/Day 7) If further investigation and/or procurement of supplies/parts would be necessary, the Contractor/Operator shall: (i) immediately provide the most suitable interim measure to reduce the magnitude of the impact; and (ii) start work on the final measure not later than 6days from the day discussion meeting is held.

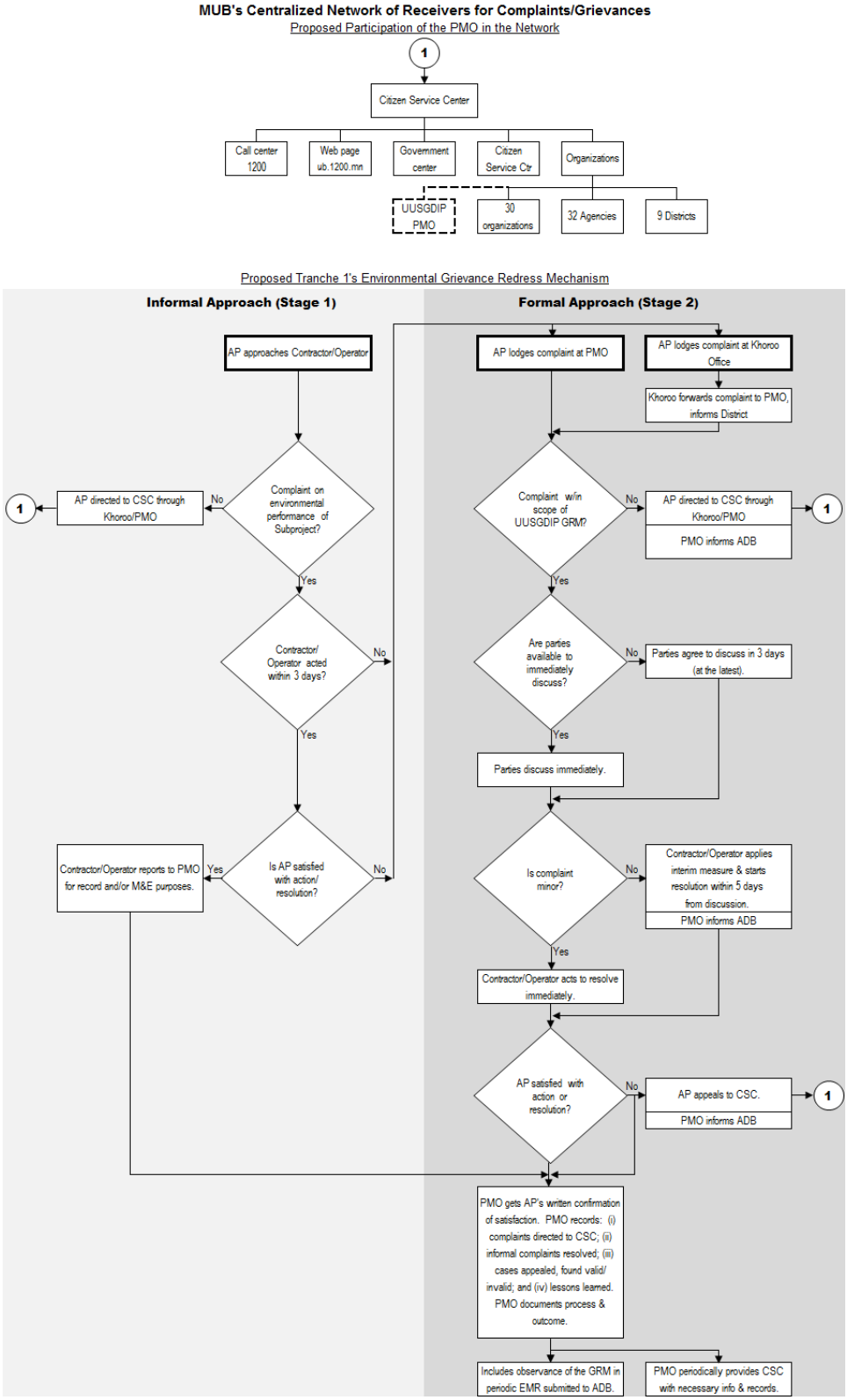
Step 5 (1 week after completion of action/measure taken)
If, according to the AP, the impact has been resolved satisfactorily, PMO shall obtain a written confirmation of satisfaction from the AP. This confirmation will signify closure of grievance and will form part of the grievance documentation. Concerned Khoroo Office and AP shall retain their copies of the confirmation. The PMO will inform ADB about the complaint and its resolution.

Step 6 (after closure of grievance)
The PMO shall monitor the effectiveness of the resolution for at least a week after closure of grievance (that is, when action implemented has been satisfactorily confirmed in writing by the complainant). Monitoring and evaluation shall be properly documented and included in the Environmental Monitoring Report.The PMO will inform ADB about the complaint and its resolution.

Step 7 (Appeal level for dissatisfied AP)
When dissatisfied (or, in the event the issue/impact persists despite actions undertaken), AP can contact the Citizen Service Center. The PMO shall ensure that ADB is immediately informed.

Informally and formally lodged complaints, discussions and agreements made, associated actions or responses taken, satisfaction/dissatisfaction of APs, complaints directed to CSC, cases appealed and found valid/invalid, and important lessons learned shall be documented for record, monitoring and evaluation, and mechanism-enhancement purposes. Records, findings and experiences shall be included in the progress and environmental monitoring reports of the Contractor, Operator and PMO.

Figure 8.1 Grievance Redress Mechanism (as defined for Project 1)



Abbreviations:AP – Affected Person CSC – Citizen Service Center GRM – Grievance Redress Mechanism M&E – Monitoring & Evaluation PMO – Program Management Office UUSGDIP – Ulaanbaatar Urban Services and Ger Areas Development Investment Program

Annex 9.
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 exceedences 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 exceedances 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