# Environmental Assessment and Review Framework

August 2016

# Mongolia: Ulaanbaatar Urban Services and Ger Areas Development Investment Program—Tranche 2

Prepared by the Municipality of Ulaanbaatar for the Asian Development Bank. This is an updated version of the draft originally posted in July 2013 available on https://www.adb.org/projects/documents/ulaanbaatar-urban-services-and-ger-areas-development-investment-program-earf

## CURRENCY EQUIVALENTS

(as of 15 August 2016)

| | | |
|---|---|---|
| Currency unit | – | togrog (MNT)} |
| MNT1.00 | = | $000.462 |
| $1.00 | = | MNT2,163.50 |

## ABBREVIATIONS

| | | |
|---|---|---|
| AP | – | affected person/people |
| ADB | – | Asian Development Bank |
| ADF | – | Asian Development Fund |
| CWWTP | – | central wastewater treatment plant |
| CDC | – | community development council |
| C- EMP | – | contractor's environmental management plan |
| CS | – | consultant services |
| DSC | – | design supervision consultants |
| ESMS | – | environmental and social management system |
| EIA | – | environmental impact assessment |
| EMP | – | environmental management plan |
| EMR | – | environmental monitoring report |
| FAM | – | facility administration manual |
| EIC | – | information, education, and communication |
| IEE | – | initial environmental examination |
| LAR | – | land acquisition and resettlement |
| MEGD | – | Ministry of Environment and Green Development |
| M&E | – | monitoring and evaluation |
| MFF | – | multitranche financing facility |
| MUB | – | Municipality Of Ulaanbaatar |
| NGOs | – | nongovernment organizations |
| PC | – | public consultation |
| PMO | – | program management office |
| PPTA | – | project preparatory technical assistance |
| REA | – | rapid environmental assessment |
| RRP | – | report and recommendation of the President to the Board |
| SPS | – | Safeguard Policy Statement |
| SME | – | Small- and medium-sized enterprise |
| USUG | – | Ulaanbaatar Water Supply and Sewerage Authority |
| WHO | – | World Health Organization |

## NOTE

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

# Environmental Assessment and Review Framework (Updated)

August 2016

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

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

## LIST OF ABBREVIATIONS

| | |
|---|---|
| AP | Affected Person/People |
| ADB | Asian Development Bank |
| ADF | Asian Development Fund |
| CWWTP | Central Wastewater Treatment Plant |
| CDC | Community Development Council |
| C- EMP | Contractor's Environmental Management Plan |
| CS | Consultant services |
| DSC | Design Supervision Consultants |
| ESMS | Environmental And Social Management System |
| EIA | Environmental Impact Assessment |
| EMP | Environmental Management Plan |
| EMR | Environmental Monitoring Report |
| FAM | Facility Administration Manual |
| IEC | Information, Education And Communication |
| IEE | Initial Environmental Examination |
| LAR | Land Acquisition And Resettlement |
| MEGD | Ministry Of Environment And Green Development |
| M&E | Monitoring & Evaluation |
| MNT | Mongolian Tugrik |
| MFF | Multi-tranche Financing Facility |
| MUB | Municipality Of Ulaanbaatar |
| NGOs | Nongovernment Organizations |
| PC | *Public Consultation* |
| PMO | Program Management Office |
| PPTA | Project Preparatory Technical Assistance |
| REA | Rapid Environmental Assessment |
| RRP | Report And Recommendation Of The President To The Board |
| SPS | Safeguard Policy Statement |
| SME | Small And Medium Enterprise |
| USUG | Ulaanbaatar Water Supply And Sewerage Authority |
| USD | United States Dollar |
| WHO | World Health Organization |

## CURRENCY EQUIVALENTS

(as of 15 August 2016)

| | | |
|---|---|---|
| Currency unit | – | Mongolian Tugrik (MNT) |
| MNT1.00 | = | $ 0.00047 |
| $1.00 | = | MNT 2,130 |

## WEIGHTS AND MEASURES

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

## NOTES

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

## CONTENTS

# I. INTRODUCTION

## A. Purpose of the EARF

1. This updated Environmental Assessment and Review Framework (EARF or ""Framework") has been prepared for the MON: Ulaanbaatar Urban Services and *Ger* Areas Development Investment Program (the Program). The Program will be a ten-year investment in three tranches, aimed at improving the quality and coverage of urban infrastructure and basic services, and implementing a sustainable and inclusive process of urban development for middle *ger* areas of Ulaanbaatar, Mongolia. 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 updated Environmental Assessment and Review Framework (EARF) has been developed and agreed with MUB, where outlines the procedures that will be followed in the environmental assessment and review of subprojects that will be prepared after Program approval in order to comply with the environmental safeguard requirements of SPS (2009) of the Asian Development Bank (ADB) and the Law of Mongolia on Environmental Impact Assessment (2012). It is intended for use primarily by the following key players: (i) Municipality of Ulaanbaatar (MUB) as the executing agency and the implementing agency of the Program; (ii) Sub-center Redevelopment Authority (SRA); (iii) Ulaanbaatar Water and Sewerage Authority (USUG) as a sub-implementing agency; and (iv) the Program Management Office (PMO).

3. The EARF provisions shall guide MUB in the selection, screening and categorization, environmental assessment, and preparation and implementation of safeguard plans (such as an environmental management plan or EMP) of components and subprojects under 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. The EARF: (i) describes the Program and its tranches; (ii) explains the general anticipated environmental impacts of tranches to be financed under the Program; (iii) specifies the requirements that will be followed related to screening and categorization of 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 preparation, implementation, and progress review of safeguard documents of subsequent tranches.

## B. Background of the Project

5. Ulaanbaatar peri-urban area (ger areas) are characterized by unplanned settlement of low- and medium-income households with un-serviced plots, inadequate and mostly unpaved road networks, and a severe lack of social and economic facilities and basic infrastructure and services for water, sewerage, and heating. Poor sanitation—households almost exclusively rely on open pit latrines—and poor waste collection have created highly unsanitary living conditions.

Air pollution is among the most severe in the world, particularly during winter because of inadequate household heating systems and unpaved roads.

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

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

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

**Output 1.** Roads and urban services are expanded within the targeted Sub-centres and connectivity between Sub-centres is improved;

**Output 2.** Economic and public services in Sub-centres are improved;

**Output 3.** Service providers become more efficient;

**Output 4.** Institutions and capacity for urban development, program management, and service delivery are strengthened.

9. **The first tranche** of the MFF supports the city master plan in developing the Selbe and Bayankhoshuu Sub-centres. The main proposed components to be financed are:

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

10. The other tranches will (i) expand the coverage of similar investments in Tranche 1 Sub-centres, as well as in other Sub-centres located in the northern and eastern parts of the ger areas; and (ii) improve road connection between the targeted Sub-centres. Khaniin Material and Market Area Sub-centres are tentatively the two main targeted areas for Tranche 2, and Ulyastai and Amgalan Sub-centres for Tranche 3. Other Sub-centres may be considered.

11. **Project 2** will expand the coverage of similar investments within Selbe and Bayankhoshuu Subcentres and in other priority Subcentres mainly located in the northern part of the mid-*ger* areas. Khaniin Material and the Market Area Subcentres are tentatively the main targeted areas in project 2. Bambadajaa, Buudal, Khailaast, and Chingeltei Subcentres 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 Subcentres and three HOBs for a total capacity of 58.4 megawatts, (iii) servicing 64.1 ha in priority Subcentres 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;[1] (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 Subcentres located in the eastern part of the city, mainly Ulyastai and Amgalan. Dari-Ekh 1 and 2 Subcentres have also been identified as potential areas for project 3. Specific investments include (i) servicing 67.8 ha of the Subcentres 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.

## ***Policy dialogue and capacity development***

13. The policy dialogue and capacity development will focus (i) in communities, on community participation, awareness, and empowerment, including design and implementation of social and gender action plan; and establishment of community development councils (CDCs) and small- and medium-sized enterprise (SME) development councils (SDCs); (ii) in Sub-centres, on Sub-center upgrading, including technical guidance for preparing and implementing local development plans, urban zoning regulation and construction standards, and a development framework with a transparent mechanism to regulate land redevelopment insuring current residents are integrated in the redevelopment plan; (iii) in the city, on the master plan through ongoing ADB technical assistance to strengthen urban planning capacity,[2] and (iv) in capacity development for water, wastewater, and heating utilities.

## ***Investment and Financing Plans***

14. The total cost of the program is $320 million. For the program, the government has requested an MFF of up to $163.70 million from a blend of ADB's Asian Development Fund (ADF), ordinary capital resources (OCR), ADB's trust funds, and other co-financing. It is expected that the Municipality of Ulaanbaatar (MUB) will finance $96 million, or 30% of the total cost, including taxes and duties, resettlement, and other miscellaneous costs. Co-financing which is estimated at $60.3 million equivalent may be provided as loans or grants. The European Investment Bank will provide a parallel co-financing up to €50 million for financing water supply and sanitation subprojects of the program.

15. The total cost of Tranche 1 is $104.52 million, inclusive of physical and price contingencies, interest, taxes and duties, and other charges. ADB financing is $53.70 million, consisting of about $22.5 million from ADF, $27.5 million from OCR, and $3.7 million as a grant

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

2 *ADB. 2013. Technical Assistance to Mongolia for Ulaanbaatar Urban Planning Capacity Improvement. Manila. Financed by the Japan Fund for Poverty Reduction*

from the Urban Environmental Infrastructure Fund. The total MUB financing is $22.44 million, and the European Investment Bank (EIB) is co-financing a total of $28.38 million.

**Table 1: Investment Program ($ million)[3]**

| Item | | Investment Program | Tranche 1 |
|---|---|---|---|
| **A.** | **Base Cost[4]** | | |
| | 1. Expanded roads and urban services | | |
| | 1.1 Roads improvement | 93.21 | 24.59 |
| | 1.2 Water supply system improvement | 35.23 | 12.39 |
| | 1.3 Sewerage system improvement | 42.91 | 13.31 |
| | 1.4 Heating services expansion | 74.67 | 30.14 |
| | **Subtotal (1)** | **246.02** | **80.43** |
| | 2. More efficient service providers | 11.48 | 3.70 |
| | 3. Increased economic and public services | 15.36 | 5.00 |
| | 4. Institutional strengthening and capacity development | | |
| | 4.1 Program management implementation support | 6.13 | 2.00 |
| | 4.2 Strengthening service providers | 1.53 | 0.50 |
| | 4.3 Sub-center development and community engagement | 4.59 | 1.50 |
| | **Subtotal (4)** | **12.25** | **4.00** |
| | **Subtotal (A)** | **285.11** | **93.13** |
| **B.** | **Contingencies[5]** | **22.63** | **7.40** |
| **C.** | **Financing Charges During Implementation[6]** | **12.25** | **4.00** |
| | **Total (A+B+C)** | **320.00** | **104.52** |

Note: Numbers may not sum precisely because of rounding

16. The program will be implemented over a period of 9 years from December 2013 to December 2022. The implementation period for Tranche 1 started in December 2013 and will be completed by December 2017. Physical infrastructures for Tranche 1 are expected to be completed by 2017.

## C. Environmental Categorization

17. Project 1 has been classified as a Category B undertaking by the ADB during PPTA, requiring an initial environmental examination (IEE). This was carried out in October 2013 following the Safeguard Policy Statement (2009) of the ADB.

18. The IEE identified a range of positive impacts and benefits and adverse issues/ concerns/impacts from the investment. Benefits include convenient access to houses and properties, and safe/potable water supply, wastewater management services, heating, and

[3] *Source: Asian Development Bank estimates.*

[4] *In mid-2013 prices. Includes value-added tax and import duties estimated at $16.7 million for the investment program and $6.18 million for project 1. The government will finance these taxes and duties through tax exemptions.*

[5] *Physical contingencies computed at 5% of civil works and consulting services. Price contingencies calculated at rates ranging from 3%–8.0% for local currency costs and 0.5%–2.2% for foreign exchange costs; includes provision for exchange rate fluctuations under a purchasing power parity exchange rate.*

[6] *Includes interest and commitment charges. Financing charges during implementation of the Asian Development Bank (ADB) loans are computed (i) at 2.0% per annum of the first tranche's loan from ADB's Special Funds resources; and (ii) at the 5-year dollar 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. Financing charges during implementation for the European Investment Bank loan were also calculated based on the 5-year dollar fixed swap rate.*

social and economic infrastructure. These will lead to positive impacts, such as improved hygiene and sanitation, reduced health risks and incidence of diseases, reduced dust suspension, reduced soil and groundwater contamination, reduced greenhouse gas emission, reduced nasty odor especially during non-winter months, and an improved business and working environment.

19. In compliance with Mongolia's environmental safeguard policy, Project 1 was subject to ***General Environmental Impact Assessment (GEIA)*** or environmental screening by the Ministry of Environment and Green Development (MEGD) in March 2013. The GEIA concluded that a ***Detailed Environmental Impact Assessment (DEIA)*** for each Sub-center was required. DEIAs have been undertaken by a MEGD-registered consulting company, and were approved in October 2013. As indicated in the Mongolian environmental regulations and ADB requirements, DEIA and EMP are subject for consideration and compliance, while Subprojects construction and operation goes on.

20. It is likely that future subprojects for Tranche 2 and Tranche 3 will seek to replicate the sample subprojects in other Subcentres and are thus expected to be category B due to the low-impact nature of such works. No category A type of works (with significant impacts) are anticipated.

21. Therefore, during project implementation, the environmental specialist of the design and supervision consultant (DSC), in collaboration with the Project Management Office (PMO) environmental officer, will assess each subproject and prepare a rapid environmental assessment (REA) checklist and detailed project description for ADB categorization assessment. If the subproject is determined by ADB to be category B, then the environmental specialist of the DSC, in collaboration with the PMO environmental officer, will prepare an IEE. The environment assessment documents will be formulated and approved by ADB before any physical activities start.

## II. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

### A. Legal Framework

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

### ***ADB's Safeguard Policy Statement (2009)***

23. 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.[7]

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

I. Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.

II. Conduct an environmental assessment for each proposed tranche to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential trans boundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.

III. Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative proposed. Also consider the no project alternative.

IV. Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare an environmental management plan (EMP) that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.

V. Carry out meaningful consultation with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders, 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

[7] *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*

with stakeholders throughout project implementation as necessary to address issues related to environmental assessment. Establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental performance.

VI. Disclose a draft environmental assessment (including the EMP) in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment, and its updates if any, to affected people and other stakeholders.

VII. Implement the EMP and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.

VIII. Do not implement project activities in areas of critical habitats, unless (i) there are no measurable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development, and management of renewable natural resources.

IX. Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions, waste generation, and release of hazardous materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phase-outs. Purchase, use, and manage pesticides based on integrated pest management approaches and reduce reliance on synthetic chemical pesticides.

X. Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities.

XI. Conserve physical cultural resources and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.

## ***National Legislation***

*Relevant Mongolian Government Acts, Rules, Strategies and Guidelines*

25. The implementation of various components of Ulaanbaatar Services and Ger Areas Development Investment Program (MFF) will be governed by Government of Mongolia (GoM) laws and regulations related to environmental considerations. Major Mongolian environmental laws and regulations relevant to the project are listed in **Table 2.**

**Table 2: Relevant Environmental Laws in Mongolia**

| Law | Enacted and Amended | Responsible Agency | Brief Description |
|---|---|---|---|
| Law on Environme | Effect in March 1995 | • Ministry of Environment, Green Development and Tourism (MEGDT) | Regulates "relations between the state, citizens, economic entities |

| Law | Enacted and Amended | Responsible Agency | Brief Description |
|---|---|---|---|
| ntal Protection | and amended in May 2012 | • State specialized agency<br>• Environmental departments of district authority<br>• Department of Environment, Green Development and Tourism of MUB<br>• National University of Mongolia<br>• Mongolia Academy of Sciences | 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 Environmental Impact Assessment | Enacted in January 1998 and last amended in 2012. | • Ministry of Environment, Green Development and Tourism (MEGDT)<br>• State specialized agency<br>• Environmental departments of district authority<br>• Department of Environment, Green Development and Tourism of MUB<br>• Legal entity/Project implementing entity<br>• Mongolian Academy of Sciences | Regulates "relations concerning protection of the environment, prevention of ecological imbalance, the use of natural resources, assessment of the environmental impact and decision-making on the start of a project". It sets out the general requirements and procedures for project screening and conduct of environmental assessment and review. |
| Law on Land | Enacted in 1994 and amended in 2012 | • Ministry of Road, Transportation, Construction and Urban Development (MRTCUD);<br>• Administration of Land Affairs, Geodesy and Cartography (ALAGac);<br>• Administration of State Registry of Titles (ASRT)<br>• State Protected Area Administration of the MEGDT | 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 Special Protected Areas | Enacted in 1994 and amended in 2004 | • Special protected areas administration department of the MEGDT<br>• Protected area administrations<br>• River basin administrations/ *recently these administrations are declined due to lack of funding*/<br>• Local government authority<br>• Department of Environment, Green Development and Tourism of MUB | Regulates relations concerning the use & taking of areas under special protection (strictly protected areas, national parks, natural reserves & national monument areas, local protected areas) |
| Law on Plant Protection | Enacted in 1996 and amended in 2007 | • Ministry of Environment, Green Development and Tourism (MEGDT)<br>• State specialized agency<br>• Environmental departments of district authority<br>• Department of Environment, Green Development and Tourism of MUB<br>• Mongolian Academy of sciences | Regulates the inhibition, protection, inspection of pasturelands & plants |
| Law on Natural Plants | Enacted in 1995 and amended in 2012 | • Ministry of Environment, Green Development and Tourism (MEGDT)<br>• State specialized agency<br>• Environmental departments of district authority<br>• Department of Environment, Green Development and Tourism of MUB<br>• Mongolian Academy of sciences | Regulates the protection, proper use, & restoration of natural plants other than forest & cultivated plants. |

| Law | Enacted and Amended | Responsible Agency | Brief Description |
|---|---|---|---|
| Law on Buffer Zones | Enacted in 1997 | • Special protected areas administration department of the MEGDT<br>• Protected area administrations<br>• River basin administrations/ *recently these administrations are declined due to lack of funding*/<br>• Local government authority<br>• Department of Environment, Green Development and Tourism of MUB | Regulates the determination of special protected area's buffer zones & activities. Article 9 requires to conduct detailed environmental assessment for the establishment of water reservoirs or construction of floodwalls or dams in buffer zones for special protected areas. |
| Law on Forests | Enacted in 1995 and amended in 2012 | • Special protected areas administration department of the MEGDT<br>• Protected area administrations<br>• River basin administrations/ *recently these administrations are declined due to lack of funding*/<br>• Local government authority<br>• Department of Environment, Green Development and Tourism of MUB<br>• State Specialized Agency | 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 Protection of Cultural Heritage | Enacted in 2001 | • MEGDT<br>• Cultural heritage department of the Ministry of Education Culture and Science<br>• Mongolian Academy of sciences (MAS) Archeological and Paleontological departments | Regulates the collection, registration, research, classification, evaluation, preservation, protection, promotion, restoration, possession and usage of cultural heritage including tangible and intangible heritage. |
| Law on Subsoil | Enacted in 1988 | • Mineral resource authority of The implementing agency of Mongolian Government<br>• MEGDT<br>• Local citizens representative meeting committee<br>• Mining companies | Regulates relations concerning the use & protection of subsoil in the interests of present and future generations. |
| Law on Soil protection and prevention from desertification | Enacted in 2012 | • MEGDT – including national programs<br>• MAS – mainly laboratories<br>• State specialized agency<br>• Local (Municipality, district and khoroo levels) government authority, including environmental departments | Regulates matters related protection of soil deterioration, exclamation, and prevention from desertification |
| Law on Water | Enacted in 1995 and amended in 2012 | • MEGDT – Land management and water policy management department<br>• River basin administrations<br>• Meteorological institute<br>• "Mongol Us" Government Organization<br>• USUG<br>• MAS laboratories<br>• Ministry of Energy – mainly on hydro-power stations<br>• State Specialized agency | 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 Air | Enacted in 1995 and amended in 2012 | • Meteorological institute<br>• MUB<br>• Clean Air program<br>• Clean Air fund<br>• EIA companies<br>• MEGDT<br>• Air pollution mitigation projects<br>• MAS – laboratories<br>• The National Committee for Reducing Air Pollution (NCRAP) | 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. Regulates regular monitoring of air pollution, hazardous impacts & changes in small air components such as ozone and hydrogen. |
| Law on Sanitation | Enacted in 1998 | State specialized agency<br>Laboratories | Governs relationships concerning maintenance of sanitary conditions, |

| Law | Enacted and Amended | Responsible Agency | Brief Description |
|---|---|---|---|
| | | | 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 Wastes | Enacted in 2012 | • State specialized agency<br>• MUB - District level infrastructure landscaping service departments<br>• Infrastructure landscaping service companies<br>• MEGDT | 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 | Enacted in 2003 and amended in 2012 | • MEGDT<br>• NEMA – National emergency management Agency<br>• State disaster protection services<br>• State emergency commission<br>• MUB and local level emergency management departments and divisions<br>• State specialized agency | 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 Fauna | Enacted in 2012 | • MEGDT<br>• MAS<br>• State specialized agency | Regulates matters related protection of animals, growth and development, breeding, rational use of its resources. |

*International Treaties*

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

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

**Table 3: Relevant International Environmental Conventions**

| Protocol/Convention |
|---|
| World Heritage Convention |
| United Nations Framework Convention on Climate Change |
| Kyoto Protocol |
| Convention on Biological Diversity |
| United Nations Convention to Combat Desertification |
| Vienna Convention for the Protection of the Ozone Layer |
| Montreal Protocol on Substances That Deplete the Ozone Layer |
| Washington Convention on International Trade in Endangered Species of Wild Fauna & Flora (CITES) |
| Basel Convention on the Control of Trans boundary Movements of the Hazardous Wastes and Their Disposal |
| Ramsar Convention on Wetlands of International Importance |
| Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and |

| Protocol/Convention |
|---|
| Pesticides in International Trade |
| Stockholm Convention on Persistent Organic Pollutants |

*Note; (a) accession; (e) entry into force; (r) ratification*

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

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

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

*Environmental, health and safety Standards*

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

30. Key standards applied for this project include the following: (i) the ambient water quality standard (MNS 4586:1998); (ii) Air quality general technical requirements (MNS 4585:2007); (iii) Groundwater quality standard (MNS 900:2005), and the WHO Guidelines for Drinking-water Quality, Fourth Edition (2011); (iv) Soil Quality, Soil Pollutant Elements and Substances Standard (MNS 5850:2008); (v) Ambient Noise Standard (MNS 4585:2007); and (vi) the occupational health and safety standard (MNS 5002:2000). These standards are listed in **Annex 1** for reference.

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

*Standards, guidelines and good practice in ADB SPS*

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

33. For this purpose IFC EHS guidelines are recommended. The *Environmental, Health, and Safety (EHS) General Guidelines1 (April 30, 2007*) will be applicable for this Project.

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

## B. Environmental Assessment Requirements of Mongolia

35. The environmental impact assessment (EIA) requirements of Mongolia are regulated by the Law on Environmental Impact Assessment (1998, revised in 2012). The terms of the law apply to all new projects, as well as rehabilitation and expansion of existing industrial, service, or construction activities and projects that use natural resources. The purpose of the law is environmental protection, the prevention of ecological imbalance, the regulation of natural

resource use, and the assessment of environmental impacts of projects and procedures for decision-making regarding the implementation of projects. The EIA process in Mongolia is summarized in Figure 1.

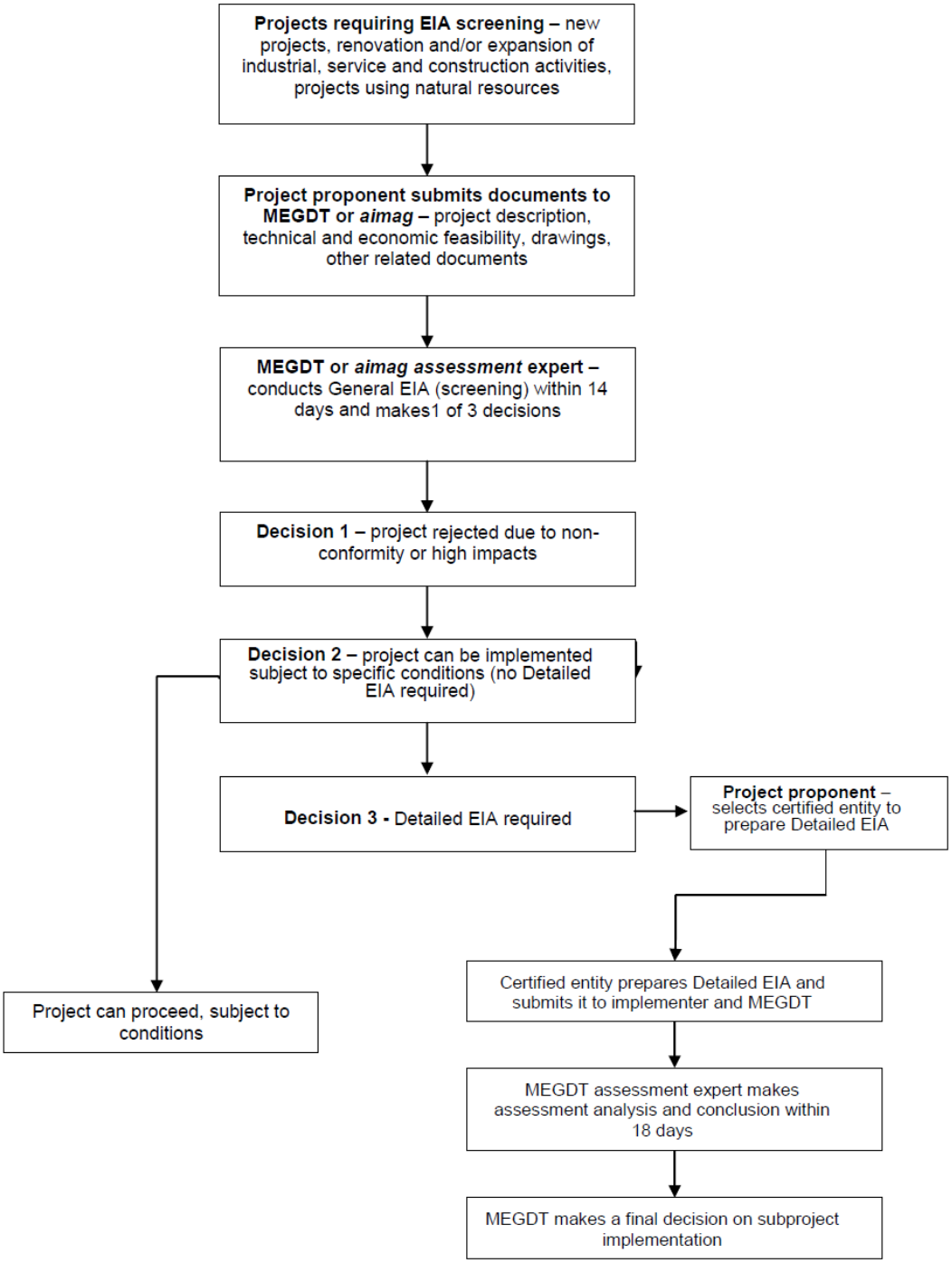
36. There are two types of EIAs defined under the Law on Environmental Impact Assessment (2012), as follows.

(i) General EIA (GEIA). To initiate a GEIA, the project proponent submits to the MEGDT or *aimag* government a brief description of the project, including feasibility study, technical details, drawings, baseline description of the project environment, and a written opinion of the *soum* governor. These documents form the basis of the GEIA and MEGDT's assessment, which will have one of three conclusions: (a) project is rejected due to non-conformity with national laws and/or the severity of impacts; (b) project may proceed, subject to specific conditions, and (iii) a detailed EIA (DEIA) is necessary. Assessment by MEGDT generally takes 14 working days.

(ii) Detailed EIA. The scope of the DEIA is defined in MEGDT's response for the GEIA. The DEIA is prepared by an accredited national entity. The DEIA is submitted by the project proponent to MEGDT and *aimag* government. The reviewer(s) of the GEIA also review the DEIA, generally within 18 working days, and present the findings to the MEGDT. Based on the content of the DEIA, reviewer conclusions, and any additional comments by MEGDT departments, MEGDT issues a decision on whether to approve or reject the project.

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

**Figure 1: Environmental Impact assessment Process in Mongolia**




38. In compliance with Mongolia's environmental safeguard policy, Project 1 was subject to General Environmental Impact Assessment (GEIA) - or environmental screening - by the Ministry of Environment and Green development (MEGD) in March 2013. The GEIA conclusion has required the preparation of a Detailed EIA (DEIA) for each Subcentres.

39. The conclusion is featured as **Annex 3**. 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.

40. The DEIAs were prepared by a MEGD-registered/licensed entity (ENVIRON) following the Directive Schedule for DEIA in the GEIA conclusion. The DEIA got approval from MEGD in October 2013.

41. By the law, when project's technical specifications changes the detailed EIA have to be updated according to the changes. Project's EPP (EMP required by the Mongolian legislation) also have to be reported to the MEGDT on annual basis and updated according to the rule approved in January 2013 by the Minister's order A-05.

42. According to the law, the Program By the rule approved by the Minister's order A-05 effective from January 2013, the Program shall submit EMP performance report to the MEGDT within twelve months from the start of the year as well as getting approval for the next year's plan and associated budget.

43. A summary of government environmental compliance requirements applicable to the tranche 1 is presented in Table 5.

**Table 5: Summary of Environmental Compliance Requirements of Tranche 1 for EARF Consideration**

| **Licences and documents for construction work in Mongolia** | | |
|---|---|---|
| **Land owning related documents** | **Agency** | **Status** |
| Land granting, owning decree | /Municipality and related district authority/ | |
| Notice on granting of land | | |
| Land agreement | | |
| Land certificate | | |
| Land registration map | | |
| Land quality statement report | The professional company executes survey and The Ministry of Road and Construction approves | |
| Remittance of auction tax (if any), remittance of land fee | | |
| Investment, cooperation agreements if required | | |
| **Documents related to prior construction** | | |
| Architectural planning assignment (including scheme-map of granted land) | | |
| Environmental state report /optional/ | Professional company conducts survey. No approval needed | |
| Approved design | | |
| Complete working design, contract on author's control | | |
| Heating supply technical specification | (Municipal Heating Networking Company - Government owned) | |
| Electrical technical specifications | (Municipal Energy Distribution Networking | |

| | | |
|---|---|---|
| | Company - Government Owned) | |
| Water supply technical specifications | (USUG) | |
| Communication technical specifications | (Information and Communication Networking Company – Government owned) | |
| Design expertise assessment | | |
| License, special permission, contract of executing company | | |
| General Environmental Impact Assessment /optional/ | Conducted by the Ministry of Green Development and Tourism | |
| Detailed Environmental Impact Assessment including EMP /if General EIA requires/ | Conducted by the professional company and the MGDT approves | |
| Customer's testimonial | | |
| Permission to start/continue construction work | | |
| | | |
| **Documents related during construction** | | |
| Licenses, special permissions, contracts of sub-contractors | | |
| Deeds of construction of hidden/inside parts | | |
| Order of nomination of Engineer technician | | |
| Certificate, passport, laboratory examination report of used materials, certificates of equipment used | | |
| Video and photos of hidden construction work and parts | | |
| Photos of performance and deed of upload in municipality database | | |
| Household water survey report, conclusion | | |
| Fire conclusion General Emergency Department | | |
| Environmental conclusion, if required | | |
| Records of construction work | | |
| EMP and monitoring report | Conducted by the executing company with the support of professional environmental company | |

## C. Institutional Capacity

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

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

46. The PMO environmental safeguard staff will be responsible for coordination and supervision of the implementation of the EARF and project 1 EMP, including (but not limited to)

i. updating IEE and EMP after detailed project design for project 1 and subsequent projects;
ii. overseeing incorporation of EMP recommendations into the bidding documents;
iii. ensuring the procurement of environmentally responsible contractors;
iv. ensuring that DEIA approval by MEGD has been secured prior to the awarding of civil works contract;
v. setting up baseline ambient air quality, noise and vibration levels, ground- and surface water quality and baseline in concerned *khoroos* for subsequent projects;
vi. setting up, coordinating, and reporting on the grievance redress mechanism (GRM, see below);

vii. monitoring contractors to ensure adherence to the project 1 EMP and the contractor EMPs;

viii. preparing monthly reports on project EMP implementation to the PMO;

ix. coordinating consultation with local stakeholders as required, informing them of imminent construction works, updating them on the latest project development activities, GRM, etc.;

x. supporting the environment consultants in conducting training, EMP compliance reviews, annual reporting, etc.; and

xi. coordinating the preparation of IEEs, including EMPs, for subsequent tranches

47. Contractors will be required to formulate contractor EMPs with complete management systems for adverse impacts, e.g., dust control, noise control, traffic management, addressing as minimum the requirements of the project 1 EMP. The contractor EMPs will be reviewed and cleared by the PMO, and by the MEGD if necessary. To ensure that the contractors comply with the project 1 EMP provisions, the PMO will prepare and provide the following specification clauses for incorporation into the bidding procedures: (i) a list of environmental management requirements to be budgeted by the bidders in their proposals; (ii) environmental clauses for contractual terms and conditions; and (iii) the full project 1 EMP and DEIAs in both languages.

**Figure 2: Implementing Organizational Structure for EMP[8]**


48. In compliance with the agreed upon procurement plan, the PMO will procure the services of environment consultants to provide support in (i) project preparation including updating the project 1 EMP; (ii) training; (iii) quarterly environmental quality monitoring (air, surface and ground water, and noise); (iv) annual project EMP implementation reporting; (v) identifying environment-related implementation issues and necessary corrective actions; and (vi) undertaking site visits as required.

[8] *SOURCE: FAM*

## III. ANTICIPATED ENVIRONMENTAL IMPACTS

49. The Program targets sustainable urban development of *ger* area Subcentres 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.

50. The potential impacts, issues and concerns from proposed activities under the Program are presented in **Table 6**.These are drawn from the rapid environmental assessment (REA) carried out in the previous TA 7591-MON and PPTA 7970-MON and the IEE for tranche 1 of the Program.

51. 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.

52. 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.

53. 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 Subcentres and urban corridors, and as such transform the *ger* areas into liveable, productive and well-functioning peri-urban areas for overall improved living conditions in Ulaanbaatar.

**Table 6: Potential Environmental Impacts, Issues, Concerns**

**Design Phase**

Involuntary resettlement and economic displacement

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

Inadequate design

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

Environmental Clearances

- Necessary consents and permits are required (Table 5) in order to implement the project, If not pursued on

time, this can delay the project. Necessary environmental clearance and permits have to be obtained and must follow the guidelines issued by authorities.

**During construction**

Impacts on the sustainability of urban services

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

Water resources problems

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

Air pollution due to dust and gas emissions

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

Noise and vibration

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

Traffic 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.

Clean Up Operations, restoration and rehabilitation

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

**During operation**

Water supply, sewerage, and heat supply subprojects

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

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

# IV. ENVIRONMENTAL ASSESSMENT FOR SUBSEQUENT TRANCHES AND SUBPROJECTS

## A. Environmental Criteria for Subproject Selection

54. 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 7** shall be applied when selecting subprojects and/or components to be invested under subsequent tranches of the Program.

**Table 7: 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; (see ii of this EARF)
- likely cause impacts that are irreversible, or cannot be mitigated to acceptable levels; and
- involve any one of the ten activities in the ADB Prohibited Investment Activities List (see **Annex 4** which is extracted from Appendix 5 of the Safeguard Policy Statement, June 2009).

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

**55.** 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[9]:

[9] *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.*

**a.** 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.

**b.** 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.

**56.** 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.

57. 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 Subcentres

**STEP 1: Screening and Categorization**

**58. 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, 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:

a. **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.
b. **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.
c. **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.

**59.** 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 5**. A REA Checklist shall be completed for each component of a tranche, but must consider each subproject and its activities. Screening and categorization shall be carried out by the MUB, through its PMO environmental Officer. The REA checklists shall be completed based on project site visits, discussions with local environmental protection authorities and other relevant stakeholders.If ADB implementation assistance teams would be granted or national consulting entities would be engaged for the preparations of 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.

**60.** 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).

**61. 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. 36-40). 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) approved or authorised as final technical and economic feasibility study; (iii) working drawings; and (iv) other relevant documents. The PMO will inform ADB on the classification by MEGD.

**STEP 2: Scoping and Field Work Preparation**

62. **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, and mitigation measures, monitoring tasks, the scope of public consultation and the eligibility range of the Grievance Redress Mechanism (GRM). In Mongolia, scoping is usually undertaken as part of the GEIA according to National legislation.

63. **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 6**).

**STEP 3: Environmental Assessment**

64. 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.

**65.** 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.

66. 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 7** 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 8: Key Steps of the Environmental Assessment Process (STEP 3)**

| |
|---|
| **STEP 3.1: Review of environment performance of preceding tranches**<br>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**<br>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**<br>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**<br>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.<br>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)**<br>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**<br>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.**<br>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). |

**67.** 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 8**); 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.

**STEP 4: Review, Approval and Disclosure**

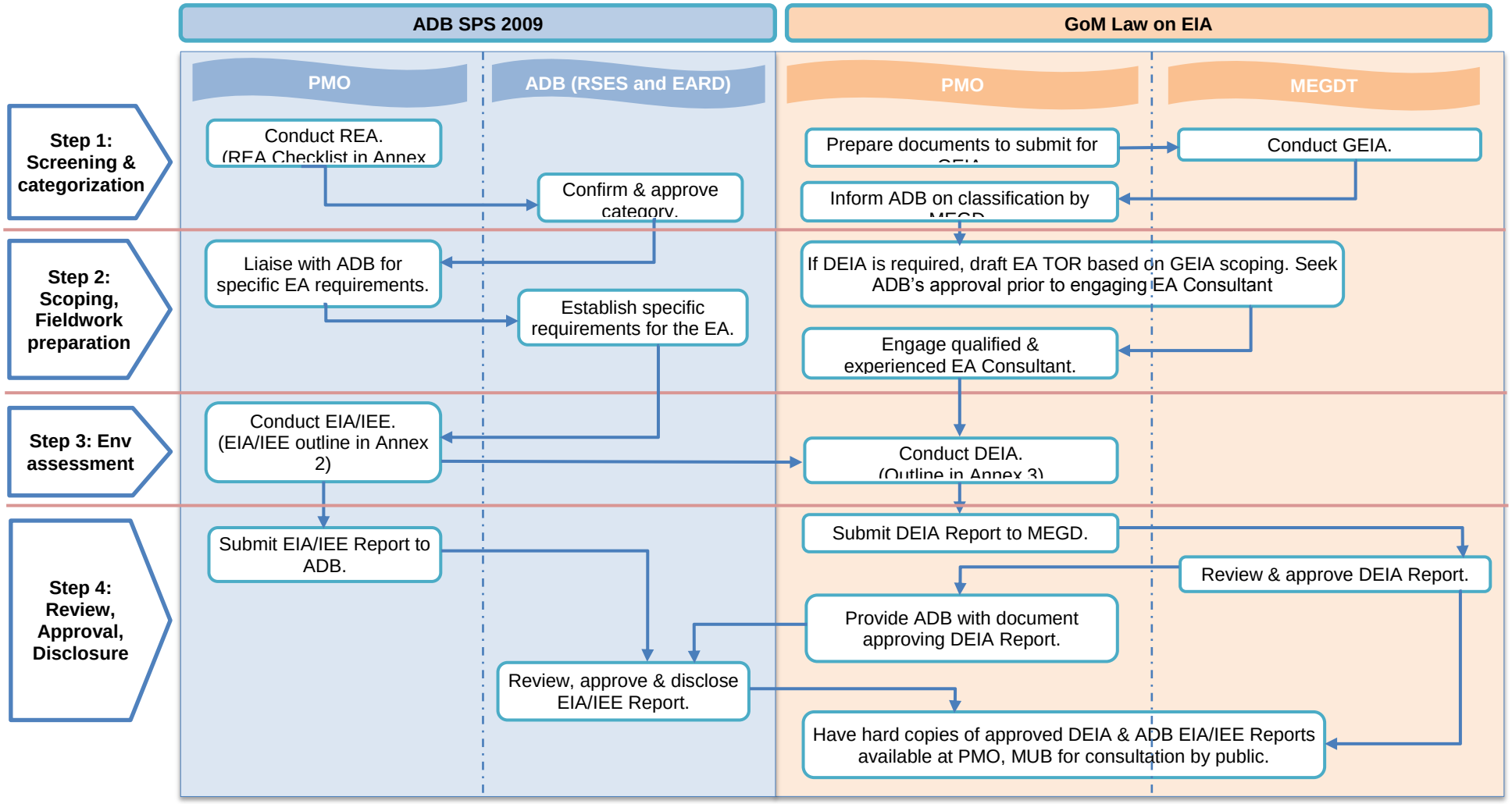
68. **ADB.** Depending on the classification of the tranche, the following procedure shall be followed for review, approval and disclosure of the environmental assessment of subsequent tranches:

a. 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;

b. 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.

69. **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 3: Environmental Assessment Procedure under the Program**



## V. CONSULTATION, INFORMATION DISCLOSURE, AND GRIEVANCE REDRESS MECHANISM

### A. Consultation and Information Disclosure

***Compliance with ADB & GoM Environmental Safeguard Requirements***

70. 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".*

71. 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 hand-outs shall be written, in the local language.

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

a. 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.

b. 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.

c. 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.

73. **Documentation.** The consultation process shall be well documented. All relevant views raised during the consultation shall be incorporated in the environmental assessment report and its environmental management plan, and considered in subproject design. Attendance sheets and notes of consultations (**Annex 9**) shall be included in the environmental assessment report as proof that consultation/s had been held. To comply with the MON legislation (as 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 8**); 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.

74. **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.

75. In addition, according to ADB's requirements, the environmental assessment document

(IEE including EMP); annual Environmental Progress Report and semi-annual Environmental monitoring reports) submitted by the PMO must be submitted to ADB and will be posted on ADB's website. The First Environmental Monitoring Report was posted in May 2016 in ADB Website (45007-004-emr 01)

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

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

78. A project-specific grievance redress mechanism (GRM) will be established to receive, evaluate, and facilitate the resolution of AP's concerns, complaints, and grievances about the social and environmental performance at the level of the project. The GRM will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. All project agencies (**Figure 2**) will be aware of the GRM and inform the PMO of any complaints received.

79. The PMO shall establish and maintain the project GRM to receive and facilitate resolution of any social or environment-related concerns or grievances about the project. The GRM will address affected people's issues promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all stakeholders at no cost and without retribution. The GRM does not impede access to the national legal system.

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

(i) Stage 1 (maximum 7 days): If a concern arises during construction, the affected person may raise the issue with the contractor, PMO, Design Supervision Consultants (CS1) or community or khoroo representatives. All agencies will be aware of the GRM and will be requested to immediately report any incidents to the PMO. If the issue is resolved directly between the affected person and contractor, no follow-up is required. But the log/record shall be saved in the GRM logbook at the PMO.

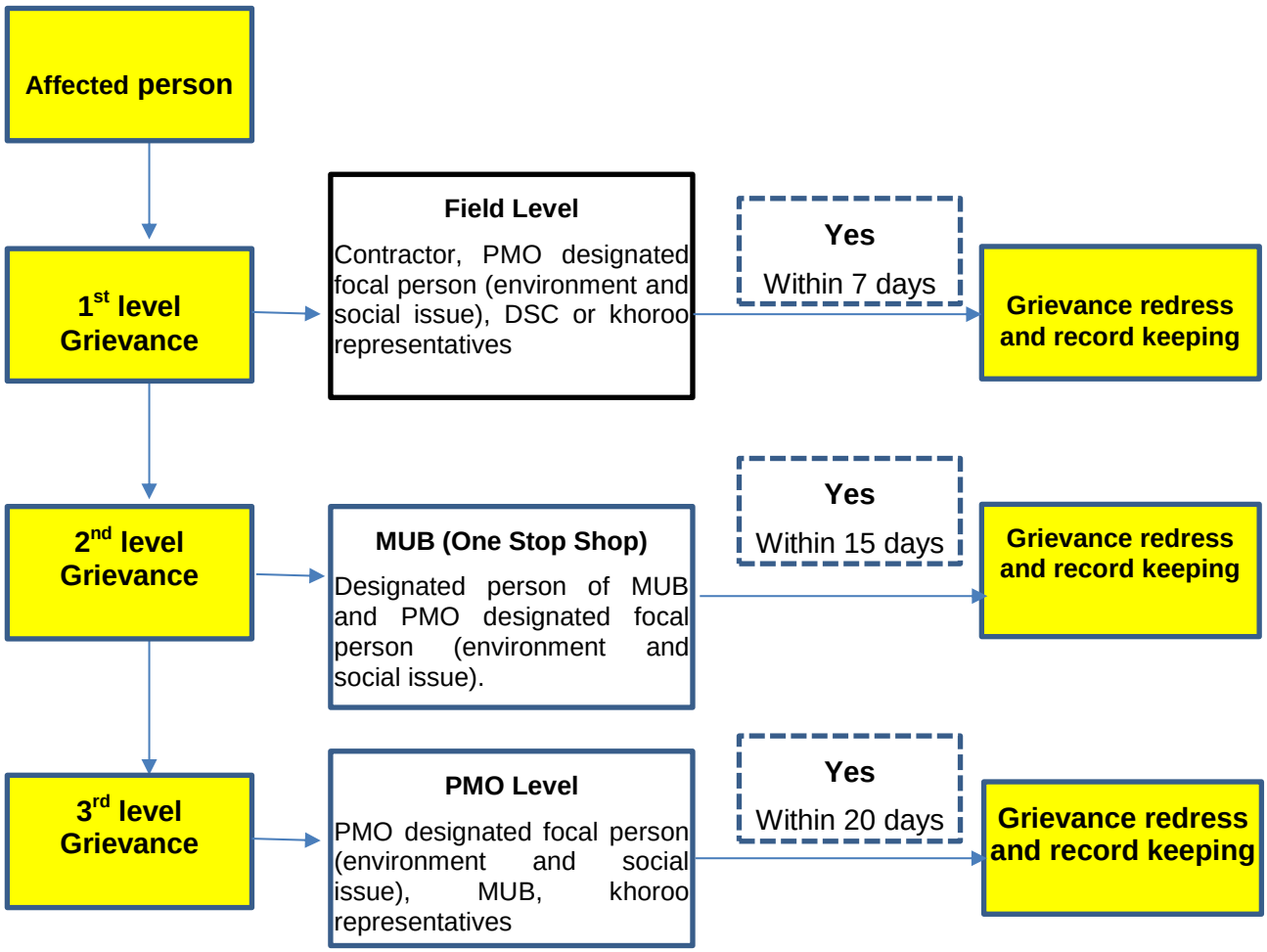
(ii) Stage 2 (maximum 15days): If the issue is not resolved, the affected person can submit an oral or written complaint to the MUB One Stop Shop. The MUB One Stop Shop and PMO will reply within two weeks and keep a written record of the whole process.

(iii) Stage 3 (maximum 20 days): If the issue is still not resolved, the PMO will, if agreed by the affected person, arrange a meeting with MUB, PMO, and relevant community and khoroo representatives to identify a solution. If the issue still cannot be resolved it will be referred to the relevant higher level authorities. The PMU may report the process to ADB at any of Stages 1–3, but will do so immediately if Stage 3 is reached.

81. *Community* -wide public awareness campaigns will ensure that awareness on grievance redress procedures is generated through the campaign. The project management office (PMO) designated focal person (environment and social issue) and community development consultants (CS -3) will conduct community -wide awareness campaigns to ensure that poor and vulnerable households are made aware of grievance redress procedures and entitlements, and will work with the PMO and, supervision consultants (CS1) to help ensure that their grievances are addressed.

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

83. **Annex 10** has the sample grievance registration form. Careful documentation of the name of the complainant, date of receipt of the complaint, address/contact details of the person, location of the problem area, and how the problem was resolved will be undertaken. The project management office (PMO) officer (who will responsible for environment and social issue) will have the overall responsibility for timely grievance redresses on environmental and social safeguards issues.




*Note: MUB- Municipality of Ulaanbaatar, PMO- Project Management Office, DSC- Design Supervision Consultants*

**Figure 4: Project Grievance Redress Mechanism**

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

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

86. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the PMU. Cost estimates for grievance redress are included in resettlement cost estimates.

## VI. INSTITUTIONAL ARRANGEMENT AND RESPONSIBILITIES

### A. Responsibilities for EARF implementation

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

88. 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.

89. The MUB has proposed to establish a **sub center redevelopment authority (SRA)**, a city-owned enterprise dedicated to the *ger* area sub center redevelopment that will facilitate, supervise, and coordinate the redevelopment process of Subcentres 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 Subcentres 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.

90. 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.

91. 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.

92. 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.

93. 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.

94. 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.

95. 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.

96. 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.

97. 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

98. 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.

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

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

## C. Staffing Requirement and Budget

101. 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.

102. EARF implementation for each tranche is estimated to cost of USD 141,000 considering Category B Project. The cost requirements, shown in **Tables 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**<br>1.1 **Legal Framework**<br>a Relevant GoM laws, regulations & standards on environmental assessment & management<br>b ADB SPS 2009<br>c EA procedure under the Program - Harmonizing the GoM & ADB safeguard Requirements | MUB-DE, USUG<br>PMO, SRA,<br>Concerned khoroos | Early stage of PIS | ½ day c/o PIS-TA |
| 1.2 **Some Aspects of EA Process & Environmental Management**<br>a Meaningful consultation & information Disclosure<br>b Grievance redress mechanism<br>c Environmentally responsible procurement<br>d Occupational & community health and safety | MUB-DE, USUG<br>PMO, SRA,<br>Concerned khoroos | Early stage of PIS | ½ day c/o PIS-TA |
| 1.3 **EMP Implementation**<br>a Implementation arrangements -Institutional responsibilities -Environmental monitoring and reporting<br>b Emergency response<br>c Performance indicators | MUB-DE, USUG<br>PMO, SRA,<br>Concerned khoroos | Early stage of PIS | ½ day c/o PIS-TA |
| 2. **By External Experts** | | | |

| | | | |
|---|---|---|---|
| 2.1 **Other relevant topics**<br>a Climate change and adaptation (applicable to eligible projects under the Program)<br>b Good engineering and construction practices as mitigation measures<br>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: Proposed Topics for Capacity Building/Training under PIS**

| Topic | Objectives | Subtopic | Target Participants |
|---|---|---|---|
| **1.** Legal Framework | • Know a list of applicable national (Mongolian) and Donor (ADB) environmental assessment requirements<br>• Acquainted with pertinent regulation and standards governing the environmental quality, health and safety, protection of sensitive areas and any other relevant regulation governing the proposed Ger Areas development investment program interventions | 1.1 Relevant GoM laws, regulations & standards on environmental assessment & management<br>1.2 ADB Safeguard Policy Statement-2009(Environment)<br>1.3 Environmental Assessment Procedure under the Program-Harmonizing the GoM & ADB Safeguard Requirements<br>1.4 Environmental Quality and Health and Safety Standards | MUB-DE, USUG, PMO, Concerned Environmental Department of three districts of Project 1 (Songino Khairkhan District for Bayankhoshuu Sub-center, Sukhbaatar District and Chingeltei District for Selbe Sub-center); Concerned Representatives of Khoroos Government Unit (Khoroos 7, 8, 9, 10, 28 in Songino Khairkhan District, Khoroo 14 in Sukhbaatar District and Khoroos 14, 18 in Chingeltei District |
| **2.** Baseline and Public Consultation | • Understand the objective of baseline and its importance in the EIA and type of information needed for baseline<br>• Know various methodology adopted for baseline data collection<br>• Identify the principles and requirements for consultation with stakeholders and the tools and techniques that can be used for this purpose. | 2.1 Baseline Data Collection<br>2.2 Meaningful Consultation and Information Disclosure<br>2.3 Grievance Redress Mechanism | Concerned personnel of MUB, PMO, CS1, UN Habitat |
| **3.** Impact Assessment and Mitigation Measures | • Provide an overview of the tools and methods used to identify, predict and evaluate different types of impacts<br>• Understand the role of mitigation in EIA | 3.1Identification and Assessment of Impacts<br>3.2Possible Environmental Impacts –Project 1<br>3.3Mitigation Measures | Concerned personnel of MUB, PMO, CS1, UN Habitat |

| | | | |
|---|---|---|---|
| | process and its importance for impact management | | |
| **4.** Environmental Management and Monitoring Plan (EMMP) | • Identify the principles, elements, and contents that are used for preparing Environmental Management and Monitoring Plan<br>• Find out major institutional arrangements for EMP implementation | 4.1 Guiding Principles of EMP<br>4.2 EMP Implementation arrangements<br>• Institutional responsibilities<br>• Environmental monitoring and reporting<br>4.3 Performance Indicators<br>4.4 Occupational and Community health and safety | Concerned Engineers of PMO (Executing as well as implementing level), Engineers of CS1, Personnel of CS4, Civil Works Contractors |
| **5.** Environmental Sound Construction Management | • Able to knowledge about Environmental Specification in contract documents and their implications<br>• Guide on Good construction practice | 5.1 Construction/Engineering Practice<br>5.2 Environmental Specification for Bid Documents<br>5.3 Incorporating EMP into Bid Documents<br>5.4 Environmental Code of Practice<br>5.5 Environmentally responsible procurement | Concerned Engineers of PMO (Executing as well as implementing level), Engineers of CS1, Personnel of CS4, Civil Works Contractors |

**Table 9: 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 Subcentres | Lump sum | 45,000 |
| | **Sub-Total** (Compliance with GOM Requirements) | | | **45,000** |
| **D.** | Capacity Development Program | | | |
| D.1 | Lectures/Seminars by external | 2-3 days | 100 | 300 |

| | |
|---|---|
| expert | |
| **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 USD = 2130 MNT

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 Subcentres, for 3-4 hours, including printing of hand-out material, rent of meeting room, food, and cash for 40 participants, estimated to cost USD 600. For the general consultation covering all Subcentres, 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.

## VII. MONITORING AND REPORTING

### A. Monitoring

103. 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:

a. 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.

b. conforming to the approved monitoring plan defined in the environmental management plans (EMPs, see below).

104. **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:

a. 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;

b. 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.

105. 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.

106. **External monitoring verification.** For tranches likely to have significant adverse environmental impacts (category A), the borrower/client will retain qualified and experienced external experts or qualified NGOs to verify its monitoring findings. External experts or NGOs are expected to have extensive experience in the design, delivery and quality assurance/quality control aspects of monitoring relevant to the specific design of the project monitoring program.

The external experts or NGOs may need to conduct site inspections so as to be able to review and verify with confidence environmental monitoring reports produced by the borrower/client.

107. **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

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

a. **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.

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

c. **Category B:** annual environmental progress and monitoring reports.

109. **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:

a. describes corrective actions necessary to address each area of concern;
b. prioritizes these actions;
c. identifies responsibilities for implementation of each corrective action;
d. identifies a time-line for their implementation; and,
e. presents a schedule for communicating the results of plan implementation to affected communities and ADB.

## VIII. ANNEXES

## ANNEX 1. Environmental Quality and Health and Safety Standards Relevant to the Subprojects under the Program during Construction and Operation

Table A1-1: Ambient Air Quality Standards MNS4585:2007 & Compared to International Standards

| Parameter | MNS 4585:2007 (µg/m$^3$) | | EHS Guidelines. World Health Organization (WHO). Air Quality Guidelines Global Update. 2005)- µg/m$^3$) | |
|---|---|---|---|---|
| $SO_2$ | 24-hour | 20 | 24-hour | 125 (Interim target-1) |
| | | | | 50 (Interim target-2) |
| | | | | 20 (guideline) |
| | 10 minute | 500 | 10 minute | 500 (guideline) |
| $NO_2$ | 1-year | 30 | 1-year | 40 (guideline) |
| | 24-hour | 40 | 24-hour | - |
| | 20-min | 85 | 1-hour | 200 (guideline) |
| $PM_{10}$ | 1-year | 50 | 1-year | 70 (Interim target-1) |
| | | | | 50 (Interim target-2) |
| | | | | 30 (Interim target-3) |
| | | | | 20 (v) |
| | 24-hour | 100 | 24-hour | 150 (Interim target-1) |
| | | | | 100 (Interim target-2) |
| | | | | 75 (Interim target-3) |
| | | | | 50 (guideline) |
| $PM_{2.5}$ | 1-year | 25 | 1-year | 35 (Interim target-1) |
| | | | | 25 (Intenm target-2) |
| | | | | 15 (Intenm target-3) |
| | | | | 10 (guideline) |
| | 24-hour | 50 | 24-hour | 75 (Interim target-1) |
| | | | | 50 (Interim target-2) |
| | | | | 37.5 (Interim target-3) |
| | | | | 25 (guideine) |
| CO | Average in 1 hour | 30g/m3 | | No standard |

Interim targets are provided in recognition of the need for a staged approach to achieving the recommended guidelines

Table A1-2: Ambient Noise Standards MNS4585:2007 & Compared to International Standards

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

Table A1-3: Ambient surface water quality standard MNS 4586:1998

| Parameter | MNS 4586-98 | |
|---|---|---|
| pH | | 6 5-8 5 |
| DO | mg/l | not less than 6&4 |
| BOD | mg/l | 3 |
| NH4*N | mgN/l | 05 |
| NO2*N | mgN/l | 0 002 |
| NO3*N | mgN/l | 9 |
| PO,-P | mgP/l | 0.1 |
| A | mg/l | 300 |
| F | mg/l | 1.5 |
| SO4 | mg/l | 100 |

| | | |
|---|---|---|
| Mn | mg/l | 0.1 |
| Ni | mg/l | 0.01 |
| Cu | mg/l | 0.01 |
| Mo | mg/l | 0.25 |
| Cd | mg/l | 0.005 |
| Co | mg/l | 0.01 |
| Pb | mg/l | 0.01 |
| As | mg/l | 0.01 |
| Cr | mg/l | 0.05 |
| Cr6+ | mg/l | 0.01 |
| Zn | mg/l | 0.01 |
| Hg | mg/l | 0.1 |
| Oil | mg/l | 0 05 |
| Phenol | mg/l | 0 001 |
| Active and washing substances | mg/l | 01 |
| Benzipyren | Mkg/1 | 0 005 |

* DO >6 mg/l for summer time and DO »4 mg/1 for winter time

Table A1-4: Ground water quality Standard MNS 900-2005 Compared to International Standards

| Parameter | MNS 900:2005 | | WHO Guidelines for Drinking Water Quality, Fourth Edition. 2011 | |
|---|---|---|---|---|
| Na- | mg/l | 200 | | None established |
| K- | mg/l | 200 | | None established |
| Ca2' | mg/l | 100 | | - |
| Mg2- | mg/l | 30 | | - |
| SO42 | mg/l | 500 | | None established |
| HCO3 | mg/l | - | | - |
| CO32 | mg/l | - | | - |
| Cl | mg/l | 350 | mg/l | 5 |
| P | mg/i | 0 7-1.5 | | - |
| Br | | - | | None established |
| Test, by mark | mg/l | 2 | | - |
| Color | degree | 20° | | None proposed |
| Odor | mark | 2 | | - |
| pH | | 6.5-8.5 | | None established |
| Electric Conductivity Y S/st | | - | | - |
| General Minerals | | 1000 | | - |
| Hardness | mg-eqv/l | 7 | | None established |
| Acidity potential | mB | | | - |
| Solid remains | g/l | 1 | | - |
| NH4 | mg/l | 1.5 | | None established |
| NO3 | mg/l | 50 | mg/l | 50 |
| NO2 | mg/l | 1 | mg/l | 3 |
| PO4 | mg/l | 35 | | - |
| As | mg/l | 001 | mg/l | 001 |
| Fe | mg/l | 0.3 | | None established |
| Pb | mg/1 | 003 | mg/l | 001 |
| Ni | mg/l | 002 | mg/l | 007 |
| Cr | mg/l | 005 | mg/l | 005 |
| Cu | mg/l | 0.1 | mg/l | 2 |
| Zn | mg/l | 5 | | None established |
| Mn | mg/l | 0.1 | | None established |
| Cd | mg/l | 0003 | mg/l | 0003 |
| Hg | mg/l | 00005 | mg/l | 0006 |
| B | mg/l | 0.5 | mg/l | 24 |

| | | | | |
|---|---|---|---|---|
| Ba | mg/l | 0.7 | mg/l | 07 |
| Mo | mg/l | 007 | | None established |
| Se | mg/l | 001 | mg/l | 004 |
| E coli or thermo tolerant coliform bacteria | | * | | Must not be detectable in any 100 ml sample |

MNS 900:2005. Drinking Water Hygienic Requirement and Quality Control is the standard used for groundwater supply, which is the source for drinking water supply in Mongolia

Table A1-5: Soil Quality Standard MNS 5850-2008

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

Table A1-6: Boiler Emission Guidelines MNS 6298:2011 and compared to International Standards

| Guideline | Parameter in mg/Nm3) | | | |
|---|---|---|---|---|
| | MNS 6298:2011 | | EHS Guidelines * | |
| $SO_2$ | mg/m3 | 400 urban 600 remote areas | mg/Nm3 | 2000 |
| NOx | mg/m3 | 450-1.100 based on volatile coal | mg/Nm3 | 650 |
| PM | mg/m3 | 50-200 | mg/Nm3 | 50-150 |
| Dry Gas Excess O2 content | - | - | % | 6 |

• Small Combustible facilities Emission Guidelines (3MWth-50MWth) - for Boilers using solid fuel

MWth - Megawatt thermal

Nm3 is at one atmospheric pressure. 0°C

Table A1-7: Standard for Wastewater Discharge to water bodies (MNS- 4943-2011)

| № | Parameter | Measuring unit | Maximum allowance |
|---|---|---|---|
| 1 | Water temperature | C | 20 |
| 2 | Hydrogen ion activity (pH) | - | 6-9 |
| 3 | Odor | Sense | No bad smell |
| 4 | Suspended solids (SS) | mg/l | 50 |

| | | | |
|---|---|---|---|
| 5 | Biochemical Oxygen Demand (BOD) | mg/l | 20 |
| 6 | Chemical Oxygen Demand (COD) | mg/l | 50 |
| 7 | Permanganate | mg/l | 20 |
| 8 | Dissolved Salt | mg/l | 100 |
| 9 | Ammonia Nitrogen (NH4-N) | mg/l | 6 |
| 10 | Total Nitrogen (TN) | mg/l | 15 |
| 11 | Total Phosphorous (TP) | mg/l | 1.5 |
| 12 | Organic Phosphorous(DOP) | mg/l | 0.2 |
| 13 | Hydrogen Sulphide (H2S) | mg/l | 1 |
| 14 | Total Iron (Fe) | mg/l | 1 |
| 15 | Aluminium (A) | mg/l | 0.5 |
| 16 | Manganese (MN) | mg/l | 0.5 |
| 17 | Total Chromium (Cr) | mg/l | 03 |
| 18 | Chromium +6 (Cr+6) | mg/l | Not specified |
| 19 | Total cyanide (CN) | mg/l | 0.05 |
| 20 | Free cyanide (CN) | mg/l | 0.05 |
| 21 | Copper (Cu) | mg/l | 0.3 |
| 22 | Boron (B) | mg/l | 0.3 |
| 23 | Lead (Pb) | mg/l | 0.1 |
| 24 | Zinc (Zn) | mg/l | 1.0 |
| 25 | Cadmium (Cd) | mg/l | 0.03 |
| 26 | Antimony (Sb) | mg/l | 0.05 |
| 27 | Mercury (Hg) | mg/l | 0.01 |
| 28 | Molybdenum (Mo) | mg/l | 0.5 |
| 29 | Total Arsenic (As) | mg/l | 0.01 |
| 30 | Nickel (Ni) | mg/l | 0.2 |
| 31 | Selenium (Se) | mg/l | 0.02 |
| 32 | Beryllium (Be) | mg/l | 0.001 |
| 33 | Cobalt (Co) | mg/l | 0.02 |
| 34 | Barium (Ba) | mg/l | 1.5 |
| 35 | Strontium (Sr) | mg/l | 2 |
| 36 | Vanadium (V) | mg/l | 0.1 |
| 37 | Uranium (U) | mg/l | 0.05 |
| 38 | Mineral oil | mg/l | 1 |
| 39 | Fat oil | mg/l | 5 |
| 40 | Surface active agents | mg/l | 2.5 |
| 41 | Phenol (C5H20H) | mg/l | 0.05 |
| 42 | Thrichloretilen | mg/l | 0.2 |
| 43 | Tetrachloretilen | mg/l | 0.1 |
| 44 | Remained chlorine (Cl) | mg/l | 1 |
| 45 | Faecal conforms | No/100ml | Not occurring in 1 ml. |

Table A1-8: Allowable limits of industrial wastewater composition before letting effluents into the public sewers and central wastewater treatment systems **(Regulation No a/11/05/A/18)**

| № | Parameters | In UB | In other urban areas |
|---|---|---|---|
| 1 | Suspended solids (SS) | 400.0 | 500.0 |
| 2 | Biochemical Oxygen Demand (BOD) | 200.0-400.0 | 250.0-500.0 |
| 3 | Chemical Oxygen Demand (COD) | 400.0-800.0 | 500.0-1000.0 |
| 4 | Copper | 0.5-1.0 | 0.5 |
| 5 | Petroleum | 0.07-0.1 | 5.0 |
| 6 | Sulphate | 1355.0-1500.0 | 1500.0 |
| 7 | Sulphide | 10.0 | 10.0 |
| 8 | Nickel | 0.5-0.65 | 0.65 |
| 9 | Lead | 0.07 | 0.1 |
| 10 | Chromium+6 | 0.27-0.5 | 0.2-0.5 |

| | | | |
|---|---|---|---|
| 11 | Total Chromium | 2.5-5.0 | 2.5-5.0 |
| 12 | Zinc | 1.0 | 1.0 |
| 13 | All types of washing chemicals | 5.0-10.0 | 10.0-20.0 |
| 14 | Phenol | 0.5-1.0 | 1.0 |
| 15 | Cadmium | 0.032-0.1 | 0.1 |
| 16 | Cyanide | 0.08-1.5 | 0.1-1.5 |
| 17 | Ammonia | 10.0-15.0 | 10.0-20.0 |
| 18 | Total Nitrogen | 30 | 30 |
| 19 | Hydrogen ion activity | 6.5-8.5 | 6.5-8.5 |
| 20 | Chlorine | 900.0-1000.0 | 1000.0 |
| 21 | Iron | 0.27-1.0 | 0.5-1.0 |
| 22 | Hydrogen ion | 0.2 | 0.2 |
| 23 | Synthetics | 25.0 | 25.0 |
| 24 | Sulphur paint | 0.45 | 0.5 |
| 25 | Water temperature | 15-40C | 30C |
| 26 | Arsenic | 0.1 | 0.1 |
| 27 | Mercury | 0.005 | 0.005 |
| 28 | Cobalt | 0.1 | 0.1 |
| 29 | Fat oil | 10.0-25.0 | 15.0-25.0 |
| 30 | Silver | 2.0 | 2.0 |
| 31 | Selenium | 0.1 | 0.1 |
| 32 | Organic phosphorous | 0.4 | 0.4 |
| 33 | Total hydrocarbon | 0.04 | 0.04 |
| 34 | Aluminium | 0.5 | 0.5 |

## ANNEX 2. General Environmental, Health and safety Guidelines- IFC-EHS

| Table 1.1.1: WHO Ambient Air Quality Guidelines[7,8] | | |
|---|---|---|
| | **Averaging Period** | **Guideline value in µg/m³** |
| **Sulfur dioxide ($SO_2$)** | 24-hour<br><br><br>10 minute | 125 (Interim target-1)<br>50 (Interim target-2)<br>20 (guideline)<br>500 (guideline) |
| **Nitrogen dioxide ($NO_2$)** | 1-year<br>1-hour | 40 (guideline)<br>200 (guideline) |
| **Particulate Matter $PM_{10}$** | 1-year<br><br><br><br>24-hour | 70 (Interim target-1)<br>50 (Interim target-2)<br>30 (Interim target-3)<br>20 (guideline)<br><br>150 (Interim target-1)<br>100 (Interim target-2)<br>75 (Interim target-3)<br>50 (guideline) |
| **Particulate Matter $PM_{2.5}$** | 1-year<br><br><br><br>24-hour | 35 (Interim target-1)<br>25 (Interim target-2)<br>15 (Interim target-3)<br>10 (guideline)<br><br>75 (Interim target-1)<br>50 (Interim target-2)<br>37.5 (Interim target-3)<br>25 (guideline) |
| **Ozone** | 8-hour daily maximum | 160 (Interim target-1)<br>100 (guideline) |

[12] US EPA Prevention of Significant Deterioration Increments Limits applicable to non-degraded airsheds.

| Table 1.1.2 - Small Combustion Facilities Emissions Guidelines (3MWth – 50MWth) – (in mg/Nm³ or as indicated) | | | | |
|---|---|---|---|---|
| **Combustion Technology / Fuel** | **Particulate Matter (PM)** | **Sulfur Dioxide ($SO_2$)** | **Nitrogen Oxides (NOx)** | **Dry Gas, Excess $O_2$ Content (%)** |
| **Engine** | | | | |
| **Gas** | N/A | N/A | 200 (Spark Ignition)<br>400 (Dual Fuel)<br>1,600 (Compression Ignition) | 15 |
| **Liquid** | 50 or up to 100 if justified by project specific considerations (e.g. Economic feasibility of using lower ash content fuel, or adding secondary treatment to meet 50, and available environmental capacity of the site) | 1.5 percent Sulfur or up to 3.0 percent Sulfur if justified by project specific considerations (e.g. Economic feasibility of using lower S content fuel, or adding secondary treatment to meet levels of using 1.5 percent Sulfur, and available environmental capacity of the site) | If bore size diameter [mm] < 400: 1460 (or up to 1,600 if justified to maintain high energy efficiency.)<br><br>If bore size diameter [mm] > or = 400: 1,850 | 15 |
| **Turbine** | | | | |
| **Natural Gas** =3MWth to < 15MWth | N/A | N/A | 42 ppm (Electric generation)<br>100 ppm (Mechanical drive) | 15 |
| **Natural Gas** =15MWth to < 50MWth | N/A | N/A | 25 ppm | 15 |
| **Fuels other than Natural Gas** =3MWth to < 15MWth | N/A | 0.5 percent Sulfur or lower percent Sulfur (e.g. 0.2 percent Sulfur) if commercially available without significant excess fuel cost | 96 ppm (Electric generation)<br>150 ppm (Mechanical drive) | 15 |
| **Fuels other than Natural Gas** =15MWth to < 50MWth | N/A | 0.5% S or lower % S (0.2%S) if commercially available without significant excess fuel cost | 74 ppm | 15 |
| **Boiler** | | | | |
| **Gas** | N/A | N/A | 320 | 3 |
| **Liquid** | 50 or up to 150 if justified by environmental assessment | 2000 | 460 | 3 |
| **Solid** | 50 or up to 150 if justified by environmental assessment | 2000 | 650 | 6 |

Notes: -N/A/ - no emissions guideline; Higher performance levels than these in the Table should be applicable to facilities located in urban / industrial areas with degraded airsheds or close to ecologically sensitive areas where more stringent emissions controls may be needed.; MWth is heat input on HHV basis; Solid fuels include biomass; $Nm^3$ is at one atmosphere pressure, 0°C.; MWth category is to apply to the entire facility consisting of multiple units that are reasonably considered to be emitted from a common stack except for NOx and PM limits for turbines and boilers. Guidelines values apply to facilities operating more than 500 hours per year with an annual capacity utilization factor of more than 30 percent.

| Table 1.3.1 Indicative Values for Treated Sanitary Sewage Discharges[a] | | |
|---|---|---|
| Pollutants | Units | Guideline Value |
| pH | pH | 6 – 9 |
| BOD | mg/l | 30 |
| COD | mg/l | 125 |
| Total nitrogen | mg/l | 10 |
| Total phosphorus | mg/l | 2 |
| Oil and grease | mg/l | 10 |
| Total suspended solids | mg/l | 50 |
| Total coliform bacteria | MPN[b] / 100 ml | 400[a] |

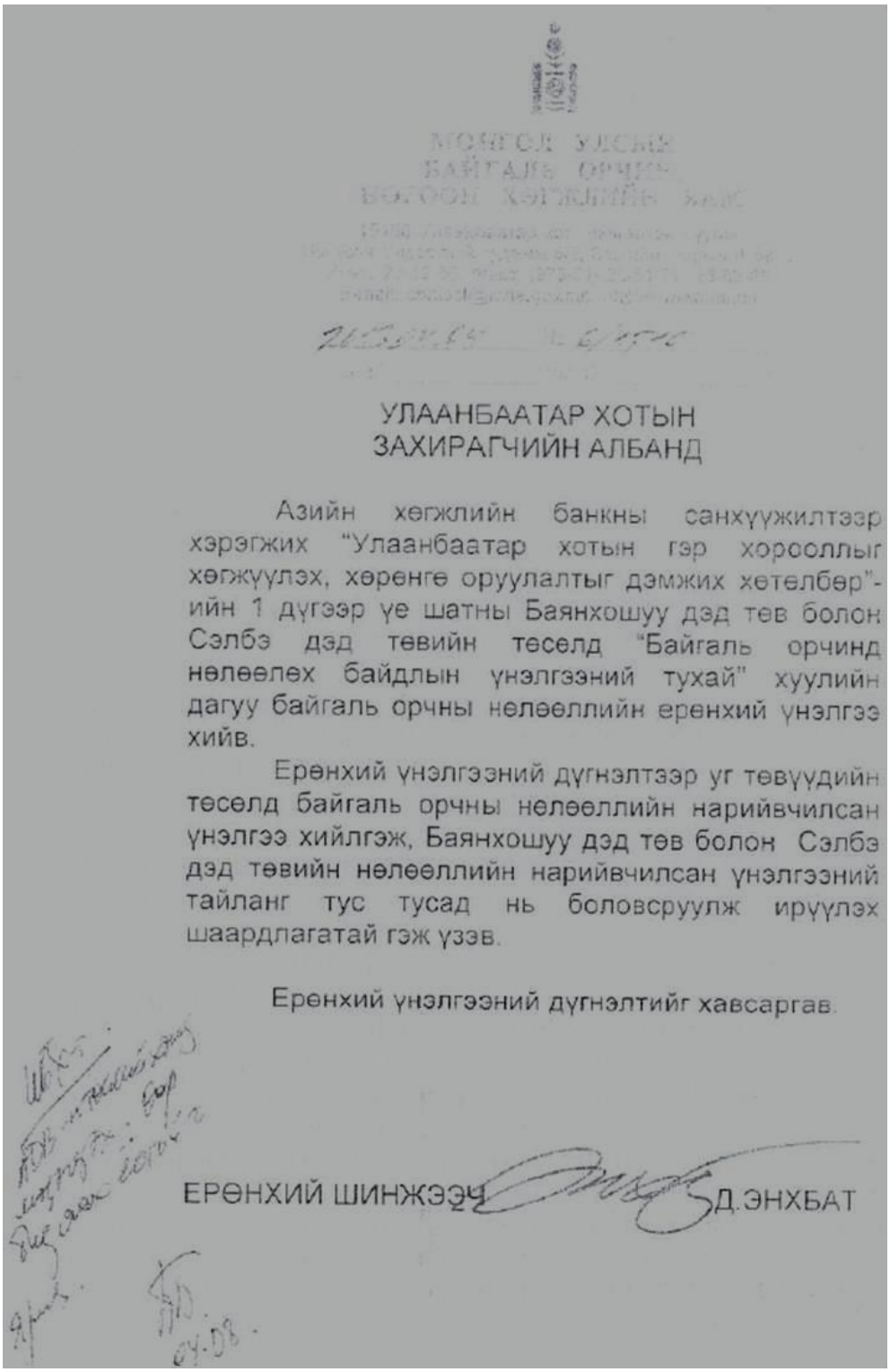
Notes:

[a] Not applicable to centralized, municipal, wastewater treatment systems which are included in EHS Guidelines for Water and Sanitation.

[b] MPN = Most Probable Number

| Table 1.7.1- Noise Level Guidelines[54] | | |
|---|---|---|
| | One Hour $L_{Aeq}$ (dBA) | |
| Receptor | Daytime 07:00 - 22:00 | Nighttime 22:00 - 07:00 |
| Residential; institutional; educational[55] | 55 | 45 |
| Industrial; commercial | 70 | 70 |

**ANNEX 3. MEGD's GEIA Conclusion for Project 1**



МОНГОЛ УЛСЫН
БАЙГАЛЬ ОРЧНЫ
БОЛОВСРОЛ 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<br>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 эд 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, угсрах 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;

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 хөгжлүүлэх 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, хөрс, 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 иргүүлсэн хүсэлт).

БУСАД АСУУДАЛ

1. Баянхошуу дэд төв болон Сэлбэ дэд төв төслийн үйл ажиллагаатай холбогдуулж орон нутгийн засаг захиргааны болон байгаль орчны 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 орчны 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.<br><br>**А.Усны асуудлаар**<br>- 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.<br>- 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,<br>- Үйл ажиллагаанаас усны нөөц горим чанарт үзүүлэх нөлөөллийг тогтоож түүнд хяналт тавих хугацаа хөрөнгө зардлыг тодорхойлох,<br>- Усны нөөц, чанарын асуудлаар хийсэн судалгаанд тус яамны БХЗГ-аар дүгнэлт гаргуулж, ус ашиглах гэрээг холбогдох байгууллагатай байгуулж, төлбөрийг тогтоосон хугацаанд барагдуулж байх.<br><br>**Б. Хөрсний асуудлаар**<br>- 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 |

5

| | | |
|---|---|---|
| тайланд тусгах;<br>- Инженерийн шугам сүлжээ, авто зам болон барилга байгууламж барих үйл ажиллагаанд ашиглагдах элс, хайрга, барилгын чулуу хууль тогтоомжоор зөвшөөрөгдсөн тусгай зөвшөөрөлтэй талбайгаас нийлүүлэх.<br><br>**В.Агаар, цаг уурын асуудлаар**<br>-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.<br><br>**Г. Ой, ургамал, амьтны асуудлаар**<br>- 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.<br>-Төслийг хэрэгжүүлэх явцад өртөх талбайн ургамлын нэр төрөл тархалтыг тогтоох ховор болон нэн ховор ургамал байгаа эсэх талаар дүгнэлт гаргаж, хэрэв тэдгээр нь өвөмдлөгийн явцад өртөхөөр байвал түүнийг хамгаалах болон шилжүүлэх арга хэмжээ түүнд шаардагдах хөрөнгө зардлыг тодорхойлох.<br>- Баянхошуу дэд төв болон Сэлбэ дэд төвүүдийн байрлах газар нутагт ногоон байгууламжийг нэмэгдүүлэх чиглэлээр нарийвчилсан төлөвлөлт хийж, хэрэгжилтийг ханган ажиллах,<br>-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, мэдээлэх 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

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-centre's projects, Project 1 of Urban Services and Ger Areas Development Investment Program USGDIP, Asian Development Bank ADB TA7970-MON.

The GEIA conclusion is assigned to contact a Detailed Environmental Impact Assessment DEIA for these sub-centres, 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

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-centre'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-centres shall be expanded/redeveloped. Within the project renovation of these sub-centres' 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-centres 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-centres 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 children 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-centres 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-centre'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-centres;
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 equipment, 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-centres and contractors' fresh water during their activities.
6. Domestic and industrial solid wastes that produce during infrastructure construction and special remains from equipment 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 labour 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-centres 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-centres;
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-centres 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 MEGD Erdenetsetseg.S

MINISTRY OF ENVIRONMENT AND GREEN DEVELOPMENT ULAANBAATAR

## 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:<br><br>**A. Water related issues**<br>-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<br>- 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<br>- To define the water resources regime and quality affected from this project and to monitor this issue and to calculate the expenditure.<br>- 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<br><br>**B. Soil related issues**<br>- 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<br>- To plan expenditure for reclamation and recovering the disturbed areas during construction period and engineering facilities of the project and to include in report<br>- 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<br><br>**C. Air, weather related issues**<br>-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<br><br>**D. Forest, plant, animal related issues**<br>-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<br>- 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-centres and to implement their proposals to be in performance<br>-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<br>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 Affairs of Capital City Major Bataa.N

## ANNEX 4. ADB LIST OF PROHIBITED INVESTMENT ACTIVITIES

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

I. Production or activities involving harmful or exploitative forms of forced labour[10] or child labour[11].

II. production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phase outs or bans, such as (a) pharmaceuticals[12], pesticides, and herbicides[13], (b) ozone-depleting substances[14], (c) polychlorinated biphenyls[15] and other hazardous chemicals,[16] (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,[17] and (e) trans boundary trade in waste or waste products;[18]

III. production of or trade in weapons and munitions, including paramilitary materials;

IV. production of or trade in alcoholic beverages, excluding beer and wine;10

V. production of or trade in tobacco;[19]

VI. gambling, casinos, and equivalent enterprises;10

VII. production of or trade in radioactive materials[20], including nuclear reactors and components thereof;

VIII. production of, trade in, or use of unbounded asbestos fibres;[21]

IX. commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests; and

X. Marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.

[10] Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.
[11] Child labor means the employment of children whose age is below the host country's statutory minimum age of employment or employment of children in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention" (www.ilo.org).
[12] A list of pharmaceutical products subject to phaseouts or bans is available at http://www.who.int.
[13] A list of pesticides and herbicides subject to phaseouts or bans is available at http://www.pic.int.
[14] A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at http://www.unep.org/ozone/montreal.shtml.
[15] group of highly toxic chemicals, polychlorinated biphenyls are likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.
[16] A list of hazardous chemicals is available at http://www.pic.int.
[17] A list is available at http://www.cites.org.
[18] As defined by the Basel Convention; see http://www.basel.int.
[19] This does not apply to project sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a project sponsor's primary operations
[20] This does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which ADB considers the radioactive source to be trivial and adequately shielded.
[21] This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

## ANNEX 5. Rapid Environmental Assessment (REA) Checklist (Urban Development )

**Instructions:**

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

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

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

**Country/Project Title:**

**Sector Division:**

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| **A. Project Siting**<br>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 | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| • Special area for protecting biodiversity | | | |
| • Bay | | | |
| **B. Potential Environmental Impacts**<br>Will the Project cause… | | | |
| ▪ impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services. | | | |
| ▪ 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? | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| ▪ 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? | | | |
| ▪ pollution of receiving waters resulting in amenity losses, fisheries and marine resource depletion, and health problems? | | | |
| ▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)? | | | |
| ▪ social conflicts if workers from other regions or countries are hired? | | | |
| ▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during operation and construction? | | | |
| ▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning? | | | |

**A Checklist for Preliminary Climate Risk Screening**

**Country/Project Title:**

**Sector:**

**Subsector:**

**Division/Department:**

| Screening Questions | | Score | Remarks[22] |
|---|---|---|---|
| **Location and Design of project** | Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides? | | |
| | Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc.)? | | |
| **Materials and Maintenance** | Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)? | | |
| | Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)? | | |
| **Performance of project outputs** | Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time? | | |

Options for answers and corresponding score are provided below:

| Response | Score |
|---|---|
| Not Likely | 0 |
| Likely | 1 |
| Very Likely | 2 |

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

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

**Other Comments**: _____

_____

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

**Prepared by: _____**

## ANNEX 6. 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. Scope of Work

3. The Consultants will consist of at least one international and one national environmental specialist. The International Environmental Specialist will have preferably 15 years of professional experience in environmental impact assessment within the context of urban environmental infrastructure and service provision. The National Environmental Specialist should be affiliated to a national institute with a valid 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 Subcentres for MEGD approval.

## E. Timetable and Outputs

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

## F. Timetable and Outputs

6. The Consultants will deliver the following outputs: (i) a completed REA Checklist for tranche categorization, end of Week 2 from mobilization; (ii) draft IEE report after a month (or a draft EIA report after six weeks) from ADB's confirmation and approval of the environmental category of Project 2 (or Project 3); (iii) official request to 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 Subcentres | 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 Subcentres, for 3-4 hours, including printing of hand-out material, rent of meeting room, food, and cash for 40 participants, estimated to cost USD 600. For the general consultation covering all Subcentres, 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 7. Outline of an ADB Environmental Impact Assessment Report[23]

*(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

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

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)*

## D. Description of the Project

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

***Suggested structure of the Chapter:***

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

## E. Description of the Environment (Baseline Data)

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

***Suggested structure of the Chapter:***

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

## F. Analysis of Alternatives

This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement. An alternative analysis is required for Cat. A projects, and is recommended for Cat. B projects, especially the comparison of with- and without project alternatives.

***Suggested structure of the Chapter:***

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

## G. Anticipated Environmental Impacts and Mitigation Measures

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

***Suggested structure of the chapter:***

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

## H. Information Disclosure, Consultation, and Participation

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

method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

***Suggested structure of the chapter:***

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

*(ii) Future Public Consultation Program*

*(iii) Information Disclosure*

## I. Grievance Redress Mechanism

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

***Suggested structure of the chapter:***

*(i) Current Practice in Mongolia*

*(ii) Grievance Redress Mechanism established for 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 8. Contents of a GoM Detailed Environmental Impact Assessment Report[24]

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

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

## ANNEX 9. 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:<br>- present the program and subprojects<br>- discuss potential environmental & social issues, concerns, impacts<br>• Responses, such as:<br>- More positive than negative response/reactions on the program/subprojects, some good recommendations raised.<br>• Outcomes, such as<br>- Built awareness on the program and potential impacts and benefits<br>- Active participation in discussion and raising their views<br>- Elicited their willingness to participate in environmental monitoring |

## ANNEX 10. GRIEVANCE REGISTRATION FORM

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

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

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

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

| | | | | |
|---|---|---|---|---|
| Position of staff member | | | | |
| Type of Grievances | Type A | Type B | Type C | Type D |
| Remarks | | | | |
| Signature of Staff member | | | | |

**Update on the case**

| Date | Update |
|---|---|
| | |
| | |
| | |
| | |

## ANNEX 11. 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<br>- 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