

Project ID/Number: P130891

MONGOLIA: SMART GOVERNMENT PROJECT

ENVIRONMENTAL MANAGEMENT PLAN

April 2021

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ABBREVIATIONS

BA	Business analytics
CS	Cabinet Secretariat
DRC	Disaster recovery center
ECOP	Environmental code of practice
EHS	Environmental, health and safety
EIA	Environmental Impacts Assessment
EMP	Environmental management plan
ePRS	e-Property Registration System
GASR	General Authority for State Registration
GRM	Grievance redress mechanism
GRS	Grievance redress service
ICT	Information and communication technology
ICIDP	Information and Communications Infrastructure Development Project
IPTA	Information Technology, Post and Telecommunications Authority
CITA	Communications and Information Technology Authority
M&E	Monitoring and evaluation
NDC	National Data Center
NEA	National enterprise architecture
NGO	Non-governmental organization
NSO	National Statistics Office
OP	Operation Policy
PDO	Project development objective
PIU	Project implementation unit
PSC	Project Steering Committee
ToR	Terms of Reference
WB	World Bank
WHO	World Health Organization

1. INTRODUCTION

1.1. Project Description

The development objective of the project is to use Information Communication Technologies (ICT) to improve accessibility, transparency and efficiency of public services in Mongolia.

The project focuses on key components of the ICT and open data ecosystem which will support Mongolia's Smart government initiative. The project consists of four components:

- 1) Component 1 Enhance civic engagement and citizen feedback mechanisms.** This Component comprises:
 - Technical consulting support for the upgrade of the central 11-11 center; Investment support to: (i) upgrade the 11-11 center system and expand hardware (ii) develop a dashboard that aggregates incoming messages and displays the information in meaningful ways; (iii) design improved accountability measures for complaints in the system; and (iv) improve and strengthen workflows and responses from Ministries resolving issues in order to enhance the overall performance of the system.
 - Support government to develop a Business analytics (BA) program consisting of the applications, tools and best practices that enable analysis of data to improve and optimize policy and program decisions and performance.
- 2) Component 2: Enabling Foundations for SMART Government.** The elements in Component 2 are:
 - Investment and technical assistance to design, develop, deploy and use the National enterprise architecture (NEA) and interoperability (e-GIF) for better strategies, processes, plans, structures, technologies and systems across the government.
 - Investment support to upgrade the National Data Center (NDC) and transition it into a national data exchange and cloud computing infrastructure for the Government.
 - Investment support to establish an Innovation Support Program to finance an innovation financing program as a mechanism to quickly identify, test, and deploy simple open data and mobile applications in support of specific government objectives in priority sectors.
 - e-Property Registration System (ePRS) to support the scale-up of the digitization of property registration and establishment of an ePRS that is currently being implemented in 5 districts of Ulaanbaatar and eight provinces to all nine districts and 21 provinces in Mongolia.
 - Capacity development support to the Cabinet Secretariat (CS) and into the Communications and Information Technology Authority (CITA; formerly known as the Information Technology, Post and Telecommunications Authority (ITPTA)) to strengthen its ability to deliver on the SMART Government program.
- 3) Component 3: Enabling Open Data.** This Component comprises:
 - Design and implementation of an open data initiative focusing on technical assistance in four main areas: i) Open data readiness assessment; ii) Policy/legal/institutional frameworks; iii) Supply of open data; iv) Demand-driven reuse and co-creation.
 - Data production capabilities of the National Statistics Office (NSO) to provide investment and technical assistance support to the NSO in connection with its data production functions.
- 4) Component 4 Project Implementation Support.**

The primary beneficiaries of the project will include the government through more efficient, cost-effective service delivery and administration; the business sector through better government services and improved collaboration in creating solution; and the citizens through better government services.

1.2. Project Implementation Arrangements

The CS, under the leadership of the Minister, will be responsible for the implementation of the project, including overall coordination, results monitoring and communicating with the World Bank.

The beneficiary agencies include the CS, CITA, NSO, General Authority for State Registration (GASR). The CITA and NSO are experienced in managing IDA-funded projects and the GASR has completed the implementation of a Millennium Challenge Corporation-funded project.

A Project Steering Committee (PSC) provides the project with overall strategic and policy guidance, monitoring functions, and attending to interagency issues. The PSC is headed by the Cabinet Secretary and comprises the Heads of the beneficiary agencies and Ministry of Finance. The PSC meets at least quarterly. The Chief Technology Officer at the CS, who is responsible for the overall project, is a member of the PSC; and the Project Coordinator acts as the Secretary to the PSC.

The Project Implementation Unit (PIU) is responsible for project implementation, including overall project management, financial management, monitoring, evaluation and reporting. It will support all beneficiary agencies with project implementation. The Project Coordinator leads the PIU, staffed with the following consultants: financial management specialist, procurement/implementation specialist to assist with procurement, translators, a communications specialist and an M&E specialist. A Project Implementation Manual has been prepared and adopted by CS to support the PIU to meet its responsibilities for management of the Project. The Manual describes the PIU's division of responsibilities, operational systems and procedures, including the PIU's organizational structure, office operations and procedures, finance and accounting procedures (including funds flow and disbursement arrangements), and procurement procedures.

The PIU will assume primary responsibility for the implementation of EMP through civil works contractors or any third-party consultants. The duties of the PIU include: (i) oversight of civil works contractors for implementing mitigation measures; (ii) liaising with local government and civil works contractors, and seeking their help to solve the environment-related issues of project implementation; and (iii) reporting to the World Bank on the implementation status of EMP semi-annually and any complaints/incidents/non-compliance immediately after knowing.

1.3. Purpose and Scope of EMP

This Environmental Management Plan (EMP) was prepared as the instrument to manage the environmental impacts and risks identified based on the environmental impact assessment conducted for the project components. Specifically, the EMP consists of the set of mitigation, monitoring, and institutional measures to be taken during project implementation and operation to eliminate adverse environmental risks and impacts, offset them, or reduce them to acceptable levels. The EMP also includes the measures and actions needed to implement these measures.

2. LEGAL, POLICY FRAMEWORK AND REGULATORY REQUIREMENTS

2.1. The World Bank Safeguard Policies

The Bank's OP 4.01 Environmental Assessment is triggered as the domestic counterpart funded activities for the disaster recovery center (DRC) involve small scale civil works. Given that the environmental impacts are of temporary nature, mostly site-specific, few if any of them are irreversible, a category B is assigned.

The Bank's OP4.10 Indigenous People Policy is triggered because ethnic minorities are or may be project beneficiaries. However, specific safeguards instruments are not required. Relevant elements of the Indigenous People Policy will be directly integrated into the project design such as: the inclusion of indigenous people in project activities through free and informed consultations during implementation; ensuring the provision of culturally appropriate project benefits by using the indigenous peoples' languages in the provision of services; establishing the estimated number of indigenous people in the selected project areas and the proportion of indigenous people likely to have access to service and information.

In addition, the EHS general Guidelines of the World Bank Group are considered applicable to the project.

2.2. Mongolian National Laws and Regulation

Mongolian National Laws: The environmental legal documents to be followed in the implementation of this project were discussed below, and they are an integral part of the environmental impact assessment. Therefore, the implementation of the following legal documents and other related documents will be one of the main responsibilities of the project implementer to encompass. The main environmental laws and regulations that should be followed by the implementer in the project are discussed below.

Laws with direct sources of ecological law include, for example, the following specialized laws on environmental issues, which are directly related to the project activities and evaluation work. These include:

- Law on Subsoil, amended 1995;
- Law on Protection of Cultural Heritage, amended 2005;
- Law on Hazardous Substances and Chemicals, amended 2006;
- Law on Waste, amended 2007;
- Law on Special Protected areas, amended 2008;
- Law on Buffer Zones, amended 2008;
- Law on Culture, amended 2008;
- Law on Land Fees, amended 2009;
- Law on Prohibition of Mineral Exploration and Mining Operations at Headwaters of Rivers, Protected Zones of Water Reservoirs and Forested Areas, amended 2009;
- Law on Natural Plants, amended 2010;
- Law on Protection of Plants, amended 2011;
- Law on Sanitation, amended 2011;
- Law on Labor Safety and Hygiene, amended 2011;
- Law on Environmental Protection, amended 2012;
- Law on Environmental Impact Assessment, amended 2012;
- Law on Air, amended 2012;

- Law on Fees for Air Pollution, amended 2012;
- Law on Water, amended 2012;
- Law on Water Pollution Fees, amended 2012;
- Law on Fees for the Use of Natural Resources, amended 2012;
- Law on Forests, amended 2012;
- Law on Land, amended 2012;
- Law on Soil Protection and Combating Desertification, amended 2012;
- Law on Fauna, amended 2012;
- Law on Minerals, amended 2012;
- Law on Fire Safety, amended 2012;
- Law on Disaster Protection, amended 2012;
- Law on Development Policy Planning, amended 2015;
- Law on Urban Settlement Areas Water Supply and Sewerage, amended 2017;
- Law on Social Welfare, amended 2018;
- Law on Health, amended 2019;

The Law on Environmental Protection is an overarching law for all environmental legislation. It is the principal law that regulates activities associated with the protection of the environment, with special emphasis on the ‘Environmental Baseline Study’, ‘Detailed Environmental Impact Assessment’, and ‘Environmental Management Plan’. It governs the land and subsoil, mineral resources, water resources, plants, wildlife, and air, and requires their protection against adverse effects to prevent ecological imbalance.

- The environmental protection law regulates the interrelations between the state, citizens, economic entities, and organizations, with a guarantee for the human right to live in a healthy and safe environment. It aims for ecologically balanced social and economic development, the protection of the environment for present and future generations, and the proper use of natural resources, including land restoration and protecting land and soil from adverse ecological effects.
- Article 7 of the law requires project proponents to conduct a natural resource assessment and environmental impact assessment (EIA) to preserve the natural state of the environment, and Article 10 requires project proponents to conduct environmental monitoring on the state and changes of the environment.
- The latest amendment to the *Law on Environmental Protection* (2012) establishes the liability of polluters to pay compensation for damage caused to the environment and natural resources. The amount of compensation payable depends on the natural resources that have suffered the damage.

The purpose of the Law on Environmental Protection is to ensure the right to live in a healthy and safe environment, to integrate social and economic development into the environment, to protect the environment for the benefit of present and future generations, and to restore its natural potential.

The table below summarizes the legal provisions that must be followed in relation to project activities.

Issues to be implemented under the laws

Compliance with the law and enforcement measures	Legal provision number
<i>The Law on Environmental Impact Assessment (EIA)</i>	
Provide environmental status assessment, general environmental impact assessment, detailed environmental impact assessment, and environmental management plan.	6.1, 7.3, 8.3, 9.1
The project's environmental management plan will be approved and the project will be approved.	9.3
As a guarantee of fulfilling its obligations to protect the environment, at least 50 percent of the expenditures required for the implementation of the annual environmental management plan shall be deposited in special environmental protection and rehabilitation account under the soum or district governor.	9.9
Submit documents related to the project impact assessment to the authorized organization and official; To inform and report on the implementation of the environmental management plan to residents, local administrations and project-affected parties to the relevant state central administrative body within the set timeframe;	14.1.1, 14.1.2
Implement public participation in accordance with government regulations	18.4, 18.5
Operating without conducting an environmental impact assessment, failing to comply with the assessment requirements, operating without an environmental management plan, or failing to implement the plan, and failing to report and report to the relevant authorities within the prescribed timeframe.	19.1, 20.1
<i>The Law on Environmental Protection</i>	
Conduct an environmental impact assessment at your own expense	7.1, 7.2
Comply with the requirements of the legislation on environmental protection, decisions of the Government, local self-governing bodies and governors, state inspectors and rangers; to strictly comply with standards, norms, rules, and regulations and to implement internal control; Register and reduce the amount of waste, clean it, reduce and stop the negative impact, and include the cost of environmental protection and rehabilitation measures in the annual budget, and refrain from any actions that may cause harm to the environment.	31.1-31.9
Compensation for damage to the environment and natural resources	40.1
<i>The Law on Natural Resource Use Fees</i>	
If the project implementer extracts and uses natural water, he/she shall pay the water use fee and use it for environmental protection measures.	15.1, 15.3, 18.1
<i>The Law on Land</i>	
Citizens, business entities, and organizations that have obtained land possession rights to conduct production and services shall, within 90 days after conducting an environmental impact assessment, conclude a land possession contract with them, issue a certificate and register them in the state registry.	34.2
If the environmental impact assessment of the land possessed by the certificate of the citizen, business entity, or organization has a negative conclusion, the issuance of the certificate shall be refused and the auction price shall be refunded.	34.3
Pay the land fee on time	35.3.3
To be responsible for maintaining the condition and quality of land, taking measures at its own expense to prevent soil degradation due to natural and human activities, soil	50.1.1

vegetation erosion, soil erosion, damage, drying, swamping, salinization, pollution, and poisoning;	
<i>The Law on Land Fees</i>	
Land fee limit of 0.1-1.0 percent per hectare of land in cities, villages, and other settlements that own and use land from its base value;	7.1
The Government shall decide on the provision of land fee discounts to citizens, business entities, and organizations using land protection and rehabilitation technologies and environmentally friendly technologies.	8.1.2
Land fee revenue shall be transferred to aimag, the capital city, and soum and district budgets.	10.1
<i>The Law on Air</i>	
Meet the requirements of air protection rules, regulations, pollutant emission standards, and norms;	9.1.2
Disposal of waste, open burning, and non-compliance with waste disposal standards in non-designated areas is prohibited.	20.6
<i>The Law on Water</i>	
The State Central Administrative Body in charge of nature and environment shall evaluate the use of more than 100 cubic meters of water per day for energy and water transportation; Aimag and capital city environmental departments shall issue conclusions on the construction of ponds and construction of canals and ditches.	28.4
Based on the conclusion specified in Article 28.4 of this Law, water-use permits shall be issued by the basin administration in case of using more than 100 cubic meters of water per day, aimag and capital city environmental services in case of using 50-100 cubic meters of water per day, and soum and district governors in case of using less than 50 cubic meters per day. register in the database.	28.6
Citizens, business entities and organizations may share water resources on a contractual basis.	28.12
It is prohibited to use water or drill any borehole without a water use conclusion and relevant permission.	28.18
The water user organization shall agree with the water user-supplied from the centralized water supply source of the population, the basin administration, aimag, and the capital city environmental department, and soum and district governors shall agree with the water user-supplied from the decentralized water supply source.	29.1
<i>The Law on Water Pollution Charges</i>	
Follow government regulations for charging for domestic wastewater	4.5
<i>The Law on Fauna</i>	
Protect plants from fires, diseases, rodents, pests, and human activities at their own expense.	7.1
<i>The Law on Waste</i>	
Separate ordinary waste in accordance with the procedures outlined in Article 9.1.3 of this Law;	10.2.1
Have a garbage bin that meets the requirements outlined in Article 15 of this law	10.2.2
Business entities and organizations shall conclude waste transportation service agreements with citizens, business entities, and organizations authorized to collect and transport waste;	10.2.3
Dispose of waste in designated bins and landfills or transfer to waste collection and transportation authorities;	10.2.4

To hand over the hazardous waste to the competent authority or to a designated special point;	10.2.5
Participate in community clean-up and community activities;	10.2.6
Pay waste service fee on time;	10.2.7
Establish waste reduction, sorting, reuse, and disposal practices;	10.2.8
Do not place advertisements on the exterior walls, fences, and fences of possession buildings as waste;	10.2.9
To clean waste, snow, and ice from public lands specified in 9.4.12 of this law;	10.2.10
Transfer waste from construction, demolition and repair activities to citizens, business entities, and organizations authorized to collect, transport, recycle, destroy and bury, and be responsible for service fees;	10.2.11
Attend training on waste and increase knowledge;	10.2.12
Reduce the impact of waste on human health and the environment by introducing the best possible technologies and environmentally friendly practices;	10.2.13
Comply with the requirements of waste legislation and standards;	10.2.14
Inform the Governor of the respective level and the emergency, police and health authorities in case of damage to human health and the environment due to waste, or case of potential danger;	10.2.15
Business entities and organizations shall organize piece of training on waste management for the employees of the organizations, acquire relevant knowledge and habits;	10.2.16
The unit responsible for sorting, collecting, transporting, recycling, reusing, incinerating, and disposing of waste generated by operations, concluding contracts related to these activities, monitoring the implementation of contracts, and cleaning the organization's internal and external environment or have an employee;	10.2.17
Business entities and organizations shall take necessary measures to reduce the impact of waste on human health and the environment, and ensure safety.	10.2.18
It is prohibited to dump waste in public lands, green areas, and flood ditches	10.3.1
It is prohibited to incinerate waste in the open or to dispose of waste in landfills or other designated areas.	10.3.3, 10.3.5
Business entities and organizations are prohibited from constructing soil polluting toilets;	10.3.6
<i>The Law on Cultural Heritage Protection</i>	
Organizations and citizens who have discovered and discovered cultural heritage shall notify the registration and database of the respective territory within 15 days and have the initial registration done	23.1
The procuring entity shall be responsible for the expenses required for the preliminary exploration and protection of the discovered historical and cultural monuments.	27.9
The find must be registered in the registration database of the soum or district within 30 days from the date of discovery.	30.4

Mongolian National Standards: The MNS prescribe allowable ambient and discharge standards for air, noise, water, and soil quality, as well as industrial effluent, wastewater, and boiler emissions. Relevant MNS are discussed below.

- MNS 4585:2007 Ambient air quality. General requirements

- MNS 4586:1998 Water quality standard
- MNS 0900:2018 Drinking water quality standard
- MNS 4943:2011 Effluent wastewater quality standard
- MNS 3342:1982 General requirements for groundwater protection
- MNS 4585:2007 Noise standard
- MNS 4219:1994 Ecological passport for business entities. Basic requirements
- MNS (ISO) 4867:1999 Water quality. Methods of sampling, storage, and protection,
- MNS (ISO) 5667-11:2000 Water quality. Sampling. Instructions for groundwater sampling
- MNS 0899:1992 Rules and requirements for the selection of water supply sources, hygiene requirements
- MNS 4047:88 Surface water quality analysis method
- MNS 5850:2008 Maximum permissible levels of soil contaminants
- MNS 3298:1991 Soil. General sampling requirements
- MNS 5914:2008 Rehabilitation of disturbed land. Terms and definitions
- MNS 5918:2008 Technical requirements for the vegetation of disturbed areas.
- MNS ISO 31000:2011 Principles and guidelines for risk management
- MNS5014:2009 Diesel engines - maximum permissible emissions and measurement methods
- MNS5013:2009 Maximum permissible levels of toxic substances in gasoline-powered cars and exhaust methods and methods of measurement

Relevant provisions of the above standards are included in the report for the assessment, analysis, and monitoring of environmental pollution.

Mongolian Procedures and Methodologies.

- Environmental Impact Assessment Procedure /Annex 2 to Government Resolution No. 374 of 2013/
- Procedure for developing, reviewing and reporting on environmental management plan /Annex to the Order A-05 of the Minister of Nature, Environment and Green Development dated January 6, 2014/
- Procedure for monitoring the transaction of a special account for environmental protection and rehabilitation guarantee /Annex to the Order A-04 of the Minister of Nature, Environment and Green Development dated January 6, 2014/
- Regulation on ensuring public participation in environmental impact assessment /Annex to the Order No. A-03 of the Minister of Nature, Environment and Green Development dated January 6, 2014/
- Methodology for Environmental Impact Assessment /Annex 2 to Order No. A-11 of the Minister of Environment and Green Development dated January 10, 2014/
- Methodology for detailed environmental impact assessment /Annex 1 to order No. A-117 of the Minister of Environment and Green Development dated April 10, 2014/
- Methodology for developing environmental management plans/Annex 1 to order No. A-117 of the Minister of Environment and Green Development dated April 10, 2014/

Legislation against the pandemic COVID19 implemented by Mongolia (April 29, 2020)

- The Law on Prevention and Combat Against COVID-19 Coronavirus Disease Pandemic and Reducing Its Impacts on Society and Economy
- Chapter 3: Rights and Obligations of Citizens and Legal Entities
- Article 12: Citizen's Rights and Obligations
- Article 13: Rights and Obligations of Business Entities and Organizations

3. POTENTIAL IMPACTS AND MITIGATION MEASURES

The project will only support non-physical activities (such as technical assistance, capacity building, investment support in IT systems and statistical production system), which are not expected to have any direct significant environmental impacts. However, there are some small-scale physical activities for the disaster recovery center (DRC) financed by the government, which include:

- Addition of 800 meters of cables and 186m of associated trenches
- A concrete foundation for a transformer substation
- Two concrete bases for the gensets
- A concrete base for the cooling towers
- Interior remodeling/renovation and IT equipment installation

The existing DRC building is located in Darkhan soum of Darkhan-Uul province, which is one of the sub-cities of Mongolia and 220 km from Ulaanbaatar. Darkhan-Uul province covers an area of 327.5 thousand hectares in the northeastern valley of the Kharaa River in the middle of the Khentii mountain range in the north of Mongolia and is located at a relatively low altitude of 707 m above sea level. Darkhan soum is located in the coniferous forest and meadow steppe region of Eurasia and in the Orkhon-Tuul lowland mountain range of East Asia. A total of 11 species of plants belonging to 10 genera of 8 sub-genera were registered in the vicinity of the project site. The most numerous of these is the Poaceae-Ueten genera. In terms of animal species composition, mammals predominate in rodents, carnivores, ungulates, insects, winged birds, and rabbits. As for birds, most of the species in the country could be found, with the predominant species including wood grouse, the hazel grouse, the hawk, the woodpecker, the cuckoo, Piet and the jay. The current Darkhan soum is organized into 18 baghs, and the soum governor's office has 103 employees working to provide public services to citizens. The project area has already been intensively disturbed by human activities, without involving critical natural habitats or legally protected cultural heritages.

The project's physical activities for the DRC are not expected to have negative impacts on biodiversity or cultural heritage. Given the scale and type of civil works, the project is expected to involve a small number of workers sourced locally. No worker camp, labor influx or significant traffic disturbance is anticipated. Potential environmental impacts during construction period include noise, dust, vehicle exhaust, and solid waste generation that are associated with minor civil works. These impacts are expected to be small, temporary, and localized, and can be mitigated by incorporating good civil work practices. Potential OHS issues are largely those associated with civil work activities. To ensure environmental sanitation and safety during operation, the design of building should consider applicable quality standards including appropriate ventilation, trash bins, lighting, fire extinguishers, toilet facilities, etc.

The following table summarizes the identified environmental impacts and corresponding mitigation measures. An Environmental Code of Practice (ECOP) for Small Civil Works was also prepared as in Annex 1.

Potential Impacts	Mitigation Measures	Institutional Responsibility	Implementation Schedule
Dust generation from excavation work for new power transmission line	Water and moisten areas where dust may form using a water machine during the warm season	Project implementer and contractor	Construction period

Soil erosion due to earthworks for power transmission lines	Disturb as little ground area as possible, refill the trench as quickly as possible, control drainage through the area, and trap sediment onsite.	Project implementer and contractor	Construction period
Loss of water due to loss of pipeline integrity	Regularly monitor the integrity of the pipeline	Project implementer and contractor	Construction period
Open dumping of waste creates environmental pollution	Codify, reuse and dispose of waste in accordance with established domestic regulatory procedures	Project implementer and contractor	Construction period
Soil degradation due to open dumping	Waste should be collected, sorted, stored in closed containers and transported at regular intervals	Project implementer	Construction period
Noise from equipment and engines can affect local communities' and workers' health	Take measures to reduce technical noise	Project implementer and contractor	Construction period
Traffic safety of local communities	Back fill the trenches as soon as possible; Warning signs and traffic safety personnel to direct traffic.	Project implementer and contractor	Construction period
Fire hazard Explosion or fire due to lightning, electric shock, overheating or sudden strong electric current;	-Develop internal rules and regulations on fire prevention and follow them; - Install fire alarm systems, place fire extinguishers in appropriate places, keep them ready at all times, and place warning leaflets and signs in places where there is a risk of fire; -Place lightning arresters in all necessary places;	Project implementer	Construction and operation period
Electrical damage	- Installation of electrical equipment and lighting inside the building in accordance with the standards for fire hazardous facilities and regular inspections; - Establish a fire protection zone and a no-fire zone, and place warning signs, billboards and signs.	Project implementer	Construction and operation period
One-year cost of implementing an environmental management plan		1,400 thousand MNT	

4. ENVIRONMENTAL MONITORING PLAN

Monitoring Specifications	Monitoring point	Time and frequency	Cost, thousand MNT / year	Standards and methods to be followed
1. AIR QUALITY				
Dust control in the air: Total dust (TSP), PM2.5, PM10	-Project implementation environment /during construction phase/	Quarterly	200.0	MNS 0017-2-5-12: 1988 MNS: 5365: 2004 MNS: 5919: 2008 MNS: 4585: 2007 MNS: 5885: 2008
2. NOISE AND VIBRATION				
-Noise from earthwork, equipment and engines	At the boundary of working site /during construction phase/	Quarterly	100.0	MNS 5002-2000
3. OCCUPATIONAL HEALTH AND SAFETY				
-Pre-employment medical examination; -Medical examination; -Workplace conditions (air quality, light, dust, heat, moisture, odor, noise and other necessary parameters)	All staff /during operation phase/	Annually	700.0	Mongolian standards for workplace and hygiene, working conditions and safety

5. INFORMATION DISCLOSURE, CONSULTATION AND GRM

5.1 Information Disclosure and Public Consultation

The EMP was publicly disclosed in Mongolian on the website of the Communications and Information Technology Authority (www.cita.gov.mn) and the Smart Government Project's website (www.smart.gov.mn/emp) on February 19, 2021 to seek the comments and opinions of the public and key stakeholders. Public consultation meeting was held on March 12, 2021 with local residents and people to discuss the environmental impacts of this project, and no complaints were received from the participants. The final EMP will be publicly disclosed on the Borrower's and the Bank's website.

5.2 Grievance Redress Mechanism

Project specific Grievance Redress Mechanism (GRM): The system was established (<http://www.smart.gov.mn/en/feedback/>) and has been operational since December 2018.

The World Bank's Grievance Redress Service (GRS): GRS provides an additional, accessible way for individuals and communities to complain directly to the World Bank if they believe that a World Bank-financed project had or is likely to have adverse effects on them or their community. The GRS accepts complaints in English or the official language of the country of the person submitting the complaint. Submissions to the GRS can be in the forms of:

- Email: grievances@worldbank.org
- Fax: +1-202-614-7313
- Letter: The World Bank Grievance Redress Service (GRS)
MSN MC 10-1018
1818 H St NW
Washington, DC 20433, USA

6. IMPLEMENTATION MONITORING OF EMP

6.1 Project Progress

The civil works have been completed, and the remaining system testing and commissioning work is expected to complete by the end of May 2021.

6.2 Implementation Arrangements for Environmental Management

The CITA and NDC assume primary responsibility for environmental management, with support from civil works contractors and EIA consultants. The civil contractors are obligated to implement the mitigation measures as described in Chapter 3. A team of 3-4 people from EIA Consultants have visited the project site twice to conduct survey, sampling, and monitoring.

6.3 Key Environmental Issues and Mitigation Measures Taken

An environmental audit was performed by the Department for Environment and Tourism of Darkhan-Uul province per to the order A/168 of the Ministry of Environment and Tourism. The key findings are summarized as below:

1. Soil erosion and dust generation from excavation work for new transmission line

- Excavated trenches to install a transmission line and made a concrete coating as per standard and norm.
- Back filled trenches with soil from excavation work.
- As soil refilling results in uneven surface, by filling additional brown soil, soil has been restored and leveled.





- Completion in watering and humidifying to dusty areas by watering machine during warm days as per schedule.

Results: Lowered dust level and prevention from soil erosion.

2. Water leakage due to damages in pipelines

- Civil contractors and PIU engineers closely monitored the pipelines' condition.

Results: No water leakage arisen during construction.

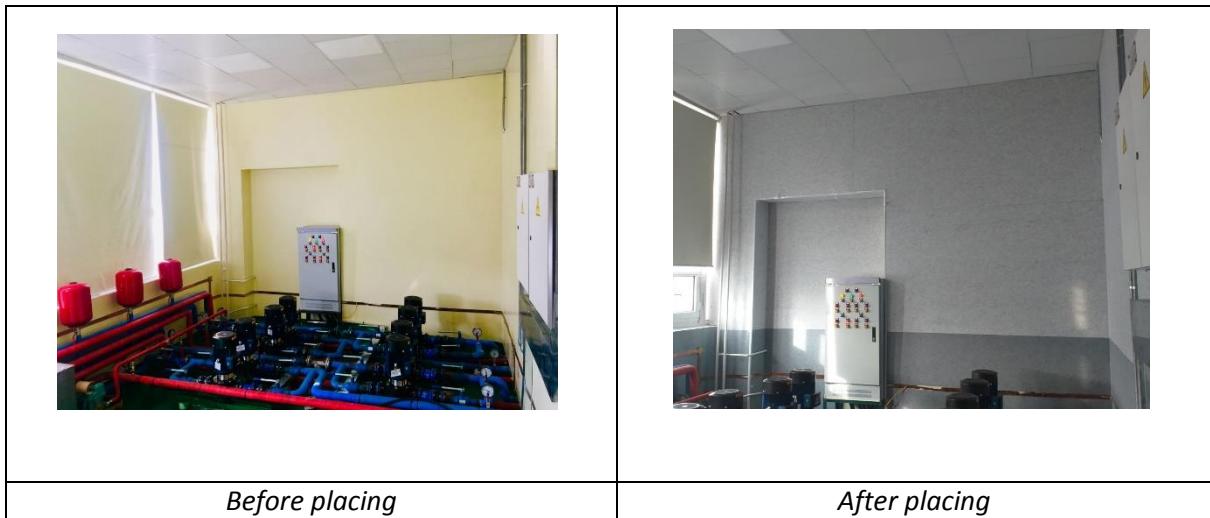
3. Improper waste disposal

- Waste from demolishing building was transported to “integrated waste disposal site” designated by Urban development department in Darkhan-Uul aimag as per rules.
- Sorted waste properly during equipment installation and the waste was transported to “integrated waste disposal site” designated by Urban development department in Darkhan-Uul aimag.
- Established sorted waste disposal sites for building operation.

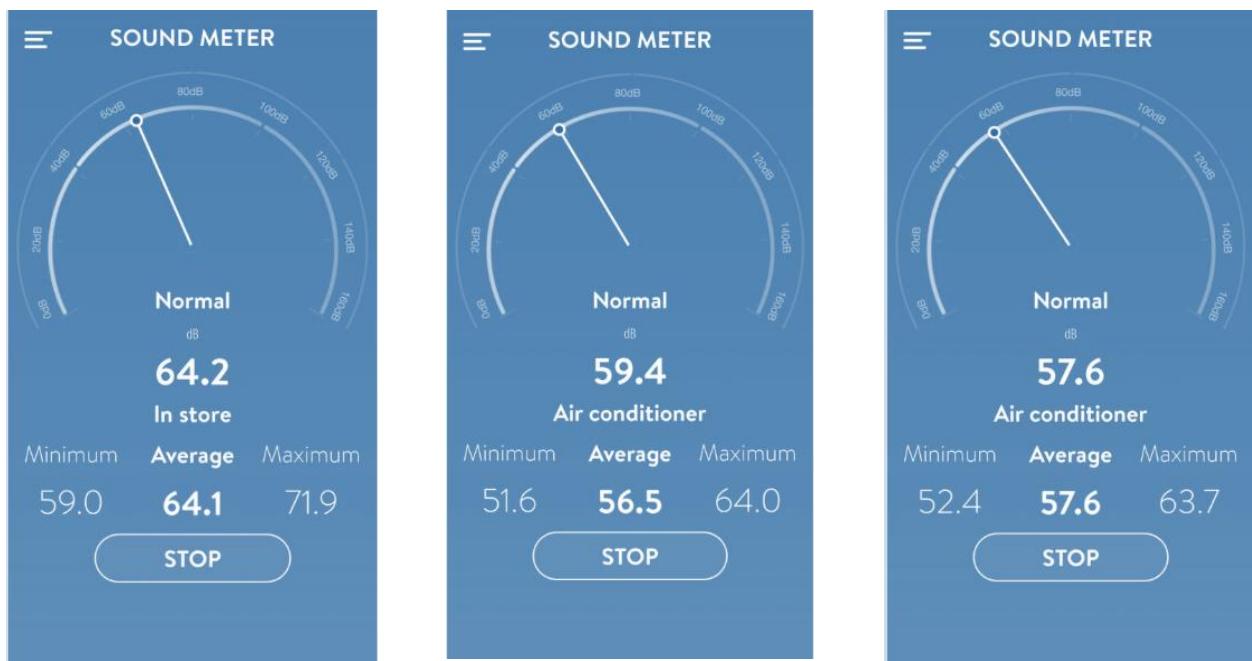
Results: Preserved land from soil degradation due to improper waste.

4. Noise from equipment and machinery engines

- Placed noise insulation board inside pumping room for cooling.



- Installed soundproofing doors to the rooms.
- Monitored noise level at the workspace was monitored and met national standard.



At the outside of door
of pump room

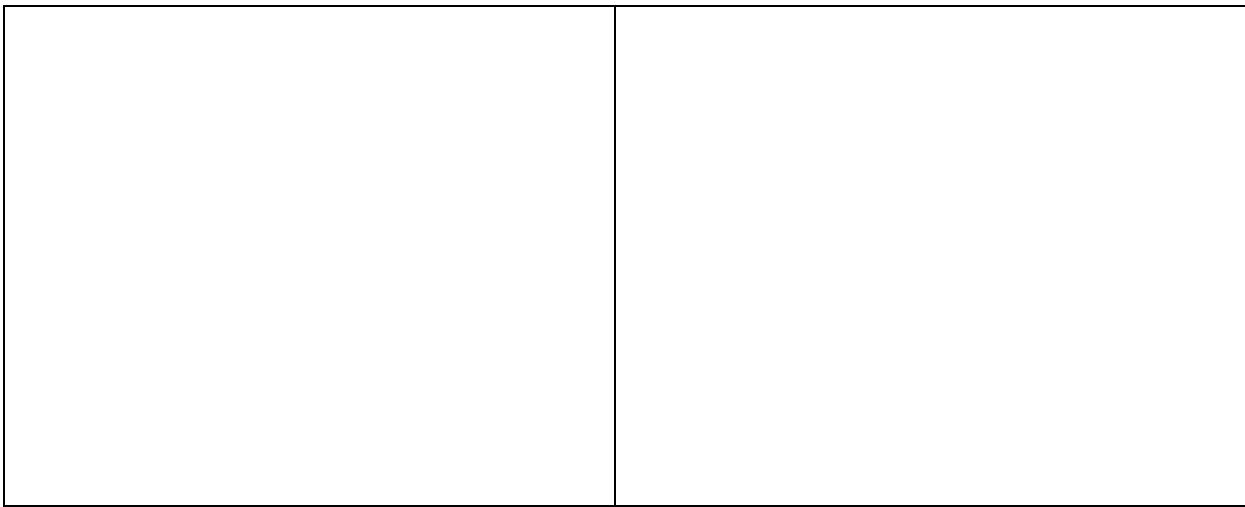
Spot for security guard

Office parts

5. Fire and electricity hazard

- Developed and followed rules and regulations on fire prevention.
- Installed fire alarms and automatic fire extinguishing systems
- placed fire extinguishers in appropriate places, kept it on alert, and put warning signs, signs, and markings in potential fire hazards.

<p>- Placed 7 carbon dioxide fire extinguishers</p> 	<p>- Placed 3 cylinders of 120 kg FM200 gas</p> 
<p>- Automatic fire extinguisher with a capacity of 20 kg</p> 	<p>- Placed a total of 31 smoke detectors in each room and objects.</p> 
<p>- Established an emergency fire shed outside the building</p> 	<p>- Placed two of air aspiration devices</p> 



- Installation of electrical equipment and lighting inside the building is carried out in accordance with the standards for fire hazardous facilities and conduct regular inspections.
- Established fire protection and open fire zones, and put warning signs, boards with picture, signs and markings in required places.

Results: Received conclusion on the prevention of possibility in various electrical failures from the inspector of Darkhan-Selenge Electricity Distribution Network LC.

Annex 1. Environmental Code of Practice (ECOP) for Small Scale Civil Works

General

The Contractor and his employees shall adhere to the mitigation measures set down in these specifications to prevent harm and nuisances on local communities, and to minimize the impacts in construction and operation on the environment.

Remedial actions, which cannot be effectively carried out during construction, should be carried out on completion of the works (and before issuance of the acceptance of completion of works):

- All affected areas should be landscaped and any necessary remedial works should be undertaken without delay, including grassing and reforestation;
- Water courses should be cleared of debris and drains and culverts checked for clear flow paths; and
- All sites should be cleaned of debris and all excess materials properly disposed;
- Borrow pits should be restored.

Construction Activities and Environmental Rules for Contractors

The following information is intended solely as broad guidance to be used in conjunction with local and national regulations. Before initiation of construction activities, the Contractor shall present the Project Engineer with a Construction Plan which explicitly states how he plans to abide by these specifications. After approval of such Plan by the Project Engineer, construction activities can proceed.

Prohibitions

The following activities are prohibited on or near the project site:

- Cutting of trees for any reason outside the approved construction area;
- Hunting, fishing, wildlife capture, or plant collection;
- Use of unapproved toxic materials, including lead-based paints, asbestos, etc.;
- Disturbance to anything with architectural or historical value;
- Building of fires;
- Use of firearms (except authorized security guards);
- Use of alcohol by workers.

Transport

The Contractor shall use selected routes to the project site, as agreed with the Project Engineer, and appropriately sized vehicles suitable to the class of roads in the area, and shall restrict loads to prevent damage to local roads and bridges used for transportation purposes. The Contractor shall be held responsible for any damage caused to local roads and bridges due to the transportation of excessive loads, and shall be required to repair such damage to the approval of the Project Engineer.

The Contractor shall not use any vehicles, either on or off road with grossly excessive, exhaust or noise emissions. In any built-up areas, noise mufflers shall be installed and maintained in good condition on all motorized equipment under the control of the Contractor.

Adequate traffic control measures shall be maintained by the Contractor throughout the duration of the Contract and such measures shall be subject to prior approval of the Project Engineer.

Workforce and Camps

The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate training as necessary.

The Contractor shall provide adequate lavatory facilities (toilets and washing areas) should be provided for the number of people expected to work in the work site. Toilet facilities should also be provided with adequate supplies of hot and cold running water, soap, and hand drying devices.

The Contractor shall install and maintain a temporary septic tank system for any residential labor camp and without causing pollution of nearby watercourses.

The Contractor shall establish a method and system for storing and disposing of all solid wastes generated by the labor camp and/or base camp.

The Contractor shall not allow the use of fuel wood for cooking or heating in any labor camp or base camp and provide alternate facilities using other fuels.

The Contractor shall ensure that site offices, depots, asphalt plants and workshops are located in appropriate areas as approved by the Project Engineer and not within 500 meters of existing residential settlements and not within 1,000 meters for asphalt plants.

The Contractor shall ensure that site offices, depots and particularly storage areas for diesel fuel and bitumen and asphalt plants are not located within 500 meters of watercourses, and are operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain. This will require lubricants to be recycled and a ditch to be constructed around the area with an approved settling pond/oil trap at the outlet.

The contractor shall not use fuel wood as a means of heating during the processing or preparation of any materials forming part of the Works.

Waste Management and Erosion

Solid, sanitation, and, hazardous wastes must be properly controlled, through the implementation of the following measures:

Waste Management:

Minimize the production of waste that must be treated or eliminated.

Identify and classify the type of waste generated. If hazardous wastes are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.

Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.

Control placement of all construction waste (including earth cuts) to approved disposal sites (>300 m from rivers, streams, lakes, or wetlands). Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.

Erosion Control:

Disturb as little ground area as possible, stabilize that area as quickly as possible, control drainage through the area, and trap sediment onsite. Erect erosion control barriers around perimeter of cuts, disposal pits, and roadways.

Conserve topsoil with its leaf litter and organic matter, and reapply this material to local disturbed areas to promote the growth of local native vegetation.

Apply local, native grass seed and mulch to barren erosive soil areas or closed construction surfaces. Apply erosion control measures before the rainy season begins preferably immediately following construction. Install erosion control measures as each construction site is completed.

In all construction sites, install sediment control structures where needed to slow or redirect runoff and trap sediment until vegetation is established. Sediment control structures include windrows of logging slash, rock berms, sediment catchment basins, straw bales, brush fences, and silt.

Control water flow through construction sites or disturbed areas with ditches, berms, check structures, live grass barriers, and rock.

Maintain and reapply erosion control measures until vegetation is successfully established.

Spray water on dirt roads, cuts, fill material and stockpiled soil to reduce wind-induced erosion, as needed

Maintenance

Identify and demarcate equipment maintenance areas (>15m from rivers, streams, lakes or wetlands). Fuel storage shall be located in proper areas and approved by the Project Engineer.

Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.

All spills and collected petroleum products shall be disposed of in accordance with standard environmental procedures/guidelines. Fuel storage and refilling areas shall be located at least 300m from all cross drainage structures and important water bodies or as directed by the Engineer.

Earthworks, Cut and Fill Slopes

All earthworks shall be properly controlled, especially during the rainy season.

The Contractor shall maintain stable cut and fill slopes at all times and cause the least possible disturbance to areas outside the prescribed limits of the works.

The Contractor shall complete cut and fill operations to final cross-sections at any one location as soon as possible and preferably in one continuous operation to avoid partially completed earthworks, especially during the rainy season.

In order to protect any cut or fill slopes from erosion, in accordance with the drawings, cut off drains and toe-drains shall be provided at the top and bottom of slopes and be planted with grass or other plant cover. Cut off drains should be provided above high cuts to minimize water runoff and slope erosion.

Any excavated cut or unsuitable material shall be disposed of in designated disposal areas as agreed to by the Project Engineer.

Disposal sites should not be located where they can cause future slides, interfere with agricultural land or any other properties, or cause soil from the dump to be washed into any watercourse. Drains may need to be dug within and around the tips, as directed by the Engineer

Stockpiles and Borrow Pits

Operation of a new borrowing area, on land, in a river, or in an existing area, shall be subject to prior approval of the Project Engineer, and the operation shall cease if so instructed by the Project Engineer.

Borrow pits shall be prohibited where they might interfere with the natural or designed drainage patterns. River locations shall be prohibited if they might undermine or damage the river banks, or carry too much fine material downstream.

The Contractor shall ensure that all borrow pits used are left in a trim and tidy condition with stable side slopes, and are drained ensuring that no stagnant water bodies are created which could breed mosquitoes.

Rock or gravel taken from a river shall be far enough removed to limit the depth of material removed to one-tenth of the width of the river at any one location, and not to disrupt the river flow, or damage or undermine the riverbanks.

The location of crushing plants shall be subject to the approval of the Engineer, and not be close to environmentally sensitive areas or to existing residential settlements, and shall be operated with approved fitted dust control devices.

In any borrow pit and disposal site, the Contractor shall:

- Identify and demarcate locations for stockpiles and borrow pits, ensuring that they are 15 meters away from critical areas such as steep slopes, erosion-prone soils, and areas that drain directly into sensitive water bodies
- Limit extraction of material to approved and demarcated borrows pits.
- Stockpile topsoil when first opening the borrow pit. After all usable borrow has been removed, the previously stockpiled topsoil should be spread back over the borrow area and graded to a smooth, uniform surface, sloped to drain. On steep slopes, benches or terraces may have to be specified to help control erosion.
- Excess overburden should be stabilized and revegetated. Where appropriate, organic debris and overburden should be spread over the disturbed site to promote revegetation. Natural revegetation is preferred to the extent practicable.

- Existing drainage channels in areas affected by the operation should be kept free of overburden.
- Once the job is completed, all construction -generated debris should be removed from the site.

Disposal of Construction and Vehicle Waste

The Contractor shall establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris.

Debris generated due to the dismantling of the existing structures shall be suitably reused, to the extent feasible, in the proposed construction (e.g. as fill materials for embankments). The disposal of remaining debris shall be carried out only at sites identified and approved by the Project Engineer. The contractor should ensure that these sites (a) are not located within designated forest areas; (b) do not impact natural drainage courses; and (c) do not impact endangered/rare flora. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.

In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such, debris or silt and restore the affected area to its original state to the satisfaction of the Project Engineer.

All arrangements for transportation during construction including provision, maintenance, dismantling and clearing debris, where necessary, will be considered incidental to the work and should be planned and implemented by the contractor as approved and directed by the Engineer.

Safety during Construction

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:

- Carefully and clearly mark pedestrian-safe access routes;
- If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;
- Maintain supply of supplies for traffic signs (including paint, easel, sign material, etc.), road marking, and guard rails to maintain pedestrian safety during construction;
- Conduct safety training for construction workers prior to beginning work;
- Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed and –shanked boots, etc.,) for construction workers and enforce their use;
- Post Material Safety Data Sheets for each chemical present on the worksite;
- Require that all workers read, or are read, all Material Safety Data Sheets. Clearly explain the risks to them and their partners, especially when pregnant or planning to start a family. Encourage workers to share the information with their physicians, when relevant;
- Ensure that the removal of asbestos-containing materials or other toxic substances be performed and disposed of by specially trained workers;
- During heavy rains or emergencies of any kind, suspend all work.
- Brace electrical and mechanical equipment to withstand seismic events during the construction.

Nuisance and Dust Control

To control nuisance and dust the Contractor should:

- Maintain all construction-related traffic at or below 15 mph on streets within 200 m of the site;
- Maintain all on-site vehicle speeds at or below 10 mph.
- To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
- In sensitive areas (including residential neighborhoods, hospitals, rest homes, etc.) stricter measures may need to be implemented to prevent undesirable noise levels.
- Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses, and especially to vulnerable people (children, elders).
- Phase removal of vegetation to prevent large areas from becoming exposed to wind.
- Place dust screens around construction areas, paying particular attention to areas close to housing, commercial areas, and recreational areas.
- Spray water as needed on dirt roads, cut areas and soil stockpiles or fill material.
- Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

Demolition of Existing Infrastructure

The Contractor shall implement adequate measures during demolition of existing infrastructure to protect workers and public from falling debris and flying objects. Among these measures, the Contractor shall:

- Set aside a designated and restricted waste drop or discharge zones, and/or a chute for safe movement of wastes from upper to lower levels
- Conduct sawing, cutting, grinding, sanding, chipping or chiseling with proper guards and anchoring as applicable
- Maintain clear traffic ways to avoid driving of heavy equipment over loose scrap
- Use of temporary fall protection measures in scaffolds and out edges of elevated work surfaces, such as hand rails and toe boards to prevent materials from being dislodged
- Evacuate all work areas during blasting operations, and use blast mats or other means of deflection to minimize fly rock or ejection of demolition debris if work is conducted in proximity to people or structures
- Provide all workers with safety glasses with side shields, face shields, hard hats, and safety shoes

Community Relations

To enhance adequate community relations, the Contractor shall:

- Inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, blasting and demolition, as appropriate.
- Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.
- At least five days in advance of any service interruption (including water, electricity, telephone, bus routes) the community must be advised through postings at the project site, at bus stops, and in affected homes/businesses.

Physical Cultural Property Chance-finds Procedures

If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the National Culture Administration take over;
- Notify the supervisory Engineer who in turn will notify the responsible local authorities and the National Culture Administration immediately (within 24 hours or less);
- Responsible local authorities and the National Culture Administration would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists of National Culture Administration. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible authorities and National Culture Administration. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- Construction work could resume only after permission is given from the responsible local authorities or National Culture Administration concerning safeguard of the heritage.

Annex 2. WHO guideline on COVID-19

In times of COVID-19 pandemic, the following measures recommended by the World Health Organization (WHO) will strictly be followed during the project implementation.

Public health and social measures contribute to stopping individual chains of transmission and preventing outbreaks, and are therefore critical in limiting further spread of COVID-19, particularly while vaccines and therapeutics are not yet available. These measures include the following:

- **Personal measures** aim to limit person-to-person spread, protect individuals and their contacts, and reduce contamination of frequently touched surfaces. Personal measures include frequent hand hygiene, physical distancing, respiratory etiquette, use of masks if ill or attending to someone who is ill, and environmental cleaning and disinfection at home.
- **Physical and social distancing measures** in public spaces prevent transmission between infected individuals and those who are not infected, and shield those at risk of developing serious illness. These measures include physical distancing, reduction or cancellation of mass gatherings, and avoiding crowded spaces in different settings (e.g. public transport, restaurants, bars, theatres), working from home, staying at home, and supporting adaptations for workplaces and educational institutions. For physical distancing, WHO recommends a minimum distance of at least one meter between people to limit the risk of interpersonal transmission.
- **Movement measures** aim to prevent introduction and limit movement of the virus from one area to another. Measures include limiting movement of persons locally or nationally, offering guidance regarding travel, arranging orderly travel in advance to avoid congestion at travel hubs, including train stations, bus terminals and airports, and considering a cordon sanitaire or other selected measures when justified by the local epidemiology of COVID-19.
- **Special protection measures** aim to protect special populations and vulnerable groups:
 - Persons at risk for more serious illness from COVID-19 (e.g. older people, persons with underlying medical conditions)
 - Persons or groups with social vulnerabilities (e.g. migrant workers, refugees, displaced populations, the homeless)
 - Persons or groups living in closed settings (e.g. long-term living facilities, 11 places of detention, camps/camp-like settings)
 - Persons or groups with higher occupational risk of exposure to the virus (e.g. staff of institutional settings, health workers and frontline responders). Protecting health and care workers also prevents outbreaks in health facilities and residences for seniors.