Mongolia: Smart Government II Project
Environmental Codes of Practice
For small civil works and equipment installation

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1 General

1.1 Project background

The Mongolia: Smart Government II Project aims to improve the quality and efficiency of online public services to citizens and businesses, and to increase digital skills and digital-enabled jobs. The project will have 5 components:

Component 1 will help to create an Enabling Environment for Digital Transformation by strengthening policies and regulations for digital transformation and connectivity; change and stakeholder management for the public sector; and promoting online engagement/participation of citizens.

Component 2 will focus on transforming digital government by increasing and improving digital public services in the e-Mongolia portal, upgrading Government of Mongolia's National Data Center (NDC) and Disaster Recovery Center (DRC), and setting up a Cybersecurity Emergency Response Team.

Component 3 will be growing the digital economy, support for digital skills training for government and citizens, digital skills and jobs for youths, especially for women, and SMEs' adoption of digital solutions.

Component 4 will support the continuation and expansion of the existing PIU that was set up by the original project.

Component 5 will finance the Contingent Emergency Response Component to allow an agile response to any emergency crisis that can be dealt with by adopting ICT technologies or equipment under the COVID-19 pandemic, such as providing additional remote work systems and support for government officials and/or Internet bandwidth for remote health facilities and educational institutions.

The physical investment will be limited to the purchase and installation of new ICT equipment and hardware, and potential minor civil works related to the use of sustainable cooling technologies and/or integration with renewable energy sources in the activity of increasing the energy efficiency of the cooling and power systems in the existing NDC (only 1307 square meters in total construction area) and DRC (only 310 square meters in total construction area), such as digging of trenches less than 500 meters in length, rehabilitation of spaces in existing buildings, electrical retrofitting, or cable routing, etc. The ICT infrastructure that would be financed will be for new functionalities and services and not for replacing old/obsolete IT equipment used by existing applications/services and be of the latest and most energy-efficient type. The NDC located in Ulaanbaatar city and the DRC located in the center of Darkhan city, the second largest city in Mongolia. Both centers are located in urbanized areas.

This Environmental Codes of Practice (ECOP) is prepared for the installation of digital infrastructures and the potential minor civil works which will fall under contractors as well as potential electronic wastes disposal which will fall under digital infrastructures operators such as NDC and DRC to mitigate the limited environmental impacts for the purpose of keeping consistent with the WB's requirements on environmental assessment. It was prepared based on the WB's EHS Guidelines and ESF. This ECOP is applicable to all the installation of digital infrastructures and the potential minor civil works as well as digital infrastructures operators under the World Bank Loan Mongolia Smart Government II Project.

The ECOP will also cover the Contingent Emergency Response Component (CERC) activities to address the associated potential limited E&S implication, such as e-waste generated during ICT equipment installation.

1.2 Objectives of the ECOP

This Environmental Codes of Practice (ECOP) is developed to present a set of detailed, technically feasible, and financially sustainable and operable environmental measures regarding to the potential negative environmental impacts involved in the installation of new digital infrastructures and the potential minor civil works, identify the measures and arrangements of environmental pollution mitigation and environment management to be implemented by the PIU, the contractors, the supervision engineers and or any third-party consultants in the tendering, design and construction stages of the Project so as to eliminate or remedy and reduce the adverse environmental and social impacts generated in the construction of the Project to an acceptable level.

1.3 Responsibilities for ECOP Implementation

Project Implementation Unit (established by the Office of the Cabinet Secretariat)

- Have overall responsibility for ensuring the implementation of the ECOP.
- Ensure all environmental and social requirements are included in the bidding documents and contracts of civil works and the installation of digital infrastructures.
- Ensure allocation of sufficient budget for ECOP implementation and monitoring.
  Provide coordination and supervision support to relevant IT facilities operators such as NDC and DRC.
- Liaise with the relevant IT facilities operators such as NDC and DRC to carry out site inspection using Checklist for Environmental Protection Inspection on Construction sites.

The benefited digital infrastructures operators such as NDC and DRC

- Ensure the design engineers, contractors implement the ECOP properly and in compliance with the requirement.
- Ensure the e-waste can be handled and disposed as per the ECOP requirements and Mongolian regulatory requirements.

Contractors

The project contractors will be responsible for implementing the ECOP and relevant environmental and social requirements. The contractors will be required to report any incidents and take appropriate action.

1.4 Relevant laws and regulations and World Bank policies

All project works must be in compliance with the following requirements:

1. Environmental law, rules and regulations and standards of Mongolia.

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2. EKHD-1-12-04-2013 Rule of Safety for Operation of Electrical Facility Installation of Mongolia.
3. Construction law of Mongolia
4. Law of Fire Safety
5. Law on Labor Safety
6. Law on Waste
7. Law on hygiene and safety
8. Law on toxic and hazardous chemicals
9. Occupational safety and health standard MNS 4994-2000
10. Transportation of construction materials in pieces and bulk. Classification, transportation condition. General requirements. MNS 5646:2006
11. Occupational safety and health. Fire safety of electricity. General requirements. MNS 5390:2004.
12. General requirements for transportation of domestic waste. MNS 5344:2011.
13. Personal protective equipment. Types and general requirements. MNS 4931:2000.
14. Environment. Re-vegetation of destroyed land. General technical requirements. MNS 5918:2008.
15. Environment Requirements for fertile soil removing and its temporary storage during the earth excavation. MNS 5916:2008.

The beneficiary building owners (National Data Centre and Disaster Recovery Center) should have the following permits from the local authorities during upgrading of Government of Mongolia's National Data Center (NDC) and Disaster Recovery Center (DRC):

1. Fire and safety approvals issued by the General Emergency Department.
2. Waste removal agreements made with local permitted entity. Permitted entities are available at all districts and soums to offer contractual services on removal and demolishing of all types of waste. The location of the waste disposal point shall be stated in the agreement.
3. Other required permits, where necessary, i.e., permits and/or technical specifications maybe required for different types of renewable energy installments, waste heat utilization depending on the design drawings.

In addition, the following EHS guidelines of the World Bank Group are considered applicable to the project, namely:

1. World Bank EHS General Guidelines
2. World Bank EHS Guidelines for Telecommunications
3. Bank's ESF/Safeguards Interim Note: COVID-19 Considerations in Construction/civil Works Projects
4. WHO Health guidance regarding COVID-19
5. Rational use of PPE for COVID-19 and considerations during severe shortages
6. Advice on the use of masks in the context of COVID-19a
7. Water, sanitation, hygiene, and waste management for the COVID-19 virus
8. Good Practice Note: Asbestos: Occupationa and Community Health Issues

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2 Requirements of the ECOP

The Contractor and its employees, the relevant digital infrastructures operators and any third-party consultants 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 under the coordination and supervisory management of the PIU.

2.1 Mitigation measures in detailed design and tendering document preparation

As the Project enters the implementation stage, relevant procurement activities will be implemented according to the Procurement Guidelines of the World Bank. The Office of Cabinet Secretary/ PIU is required to include the mitigation measures proposed in the ECOP against any potential adverse environmental impacts into the technical specifications of the tendering documents and design drawing and the construction design under the coordination, guidance and supervision of the PIU. The tendering documents need to require the tenderer to make commitments on the following environment management requirement in the bid document and incorporate such contents into the construction contract of the civil works.

1. The contractor is required to provide one environment engineer on each construction site responsible for implementing the environmental protection measures throughout the construction stage to assure that the construction activities of the contractor and its subcontractors (if any) satisfy the various requirements of this ECOP and necessary environmental protection measures are taken in the construction process.

2. In the construction process, the contractor is required to communicate and negotiate with the local people in the project area and set up a bulletin board at the entrance of each construction site to disclose detailed information to the public such as construction works, construction time as well as the contact person and contact information for complaints and advices.

3. The contractor should actively assist the construction supervision agency commissioned by the owner in carrying out the various environmental supervision tasks in the construction stage.

4. The contractor must include the “Site Environment Management Plan” in its construction program after the contract is signed and before the commencement of the construction works.

5. The contractor must respect the local construction safety and civilization requirements.

6. The contractor should take timely remedial measures in case of any serious environmental impacts arising from non-compliance of environmental protection measures proposed in this ECOP and a report should be delivered within 24 hours to the World Bank PIU. The PIU should supervise and assist the contractor to take such remedial measures. The contractor must keep records of the implementation status of such measures and report to the construction supervision unit and the PIU.

2.2 Construction and Installation Activities and Environmental Rules for Contractors

Any huts, office accommodations, toilets and welfare facilities should be accommodated within the boundaries of the construction sites. The contractor should prepare a layout and obtain PIU/building owner’s permission prior commencement of works. The layout plan shall indicate stockpiling of materials and waste containers.

The Contractor should always follow a 'good housekeeping' policy. This should include, but not necessarily be limited to the following:

- Ensure considerate behavior of the Contractor's staff
- Prohibit open fires
- Ensure that appropriate provisions for dust control and road cleanliness are implemented
- Remove rubbish at frequent intervals, leaving the construction sites clean and tidy
- Remove food waste
- Frequently inspect, repair and re-paint as necessary all construction site hoardings
- Remove all flying posts/boards as soon as reasonably practicable and within 24 hours of notice
- Maintain toilet facilities and other welfare facilities for staff

Core working hours should be from 08:00 to 18:00 on weekdays and 08:00 to 13:00 on weekend. Noisy operations shall not take place outside these hours without prior approval from the PIU and/or building owners and relevant authorities. Individual construction site requirements which differ from the above should be considered on a site-by-site basis.

On completion of the works the Contractor should clear away and remove all materials and rubbish and temporary works of every kind. Construction sites should be left clean and in a condition to the satisfaction of the PIU or delegated agencies and authorities.

2.3 Public information and site access

Any un-authorized entry to or exit from the construction sites should be restricted as much as possible. Upon request, the Contractor should provide public information on the construction program (start and finish dates), plus a telephone number for public contacts and/or requests.

2.4 Prohibitions

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

- 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;
- Burning of waste;
- Illegal dumping of ICT equipment, material and debris;
- Use of firearms (except authorized security guards);
- Use of alcohol by workers.
- Illegal sourcing of construction materials such as sand and gravel.

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2.5 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.

2.6 Workforce

The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate training as necessary.
The Contractor shall not allow the use of fuel wood for cooking or heating at the construction site or surrounding area.
The Contractor shall ensure that site offices, depots, and workshops are located in appropriate areas. Clean and well-maintained toilets should be made available.
The Contractor shall adequately provide workers with necessary tools including necessary PPEs.

2.7 Waste Management and Erosion:

All waste shall be picked up and handled by a contracted qualified entity of the contractor and the digital infrastructures operators. Waste removal agreements made by the contractor and digital infrastructures operators with local permitted entity should be attached to the environmental management implementation report and submitted to the PIU. Permitted entities are available at all districts and soums to offer contractual services on removal and demolishing of all types of waste. The location of the waste disposal point shall be stated in the agreement.

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

Waste Management:

Waste management planning. Possible construction wastes should be characterized according to composition, source, types of wastes produced, generation rates, or according to local regulatory requirements. Processes should be designed and operated as much as possible to prevent or minimize the quantities of wastes generated and hazards associated with the wastes generated. For example:

- Substitute raw materials or inputs with less hazardous or toxic materials;
- Institute good housekeeping and operating practices

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- Institute procurement measures that recognize opportunities to return usable materials such as containers;
- Minimize hazardous waste generation by implementing stringent waste segregation to prevent the commingling of non-hazardous and hazardous waste.

Recycling planning. The contractor shall evaluate, analyze the potential waste for recycling, identify recyclable fractions that could be used. The total amount of waste may be significantly reduced through the waste recycling.

Clean-up procedures. The Contractor shall establish and enforce daily site clean-up procedures, including maintenance of adequate storage and treatment/disposal facilities for construction wastes to avoid potential impacts to human health and the environment. Management approaches should be consistent with the characteristics of the waste and local regulations, and may include one or more of the following principles:

- On-site or off-site biological, chemical, or physical waste material should either be treated to render it nonhazardous prior to final disposal or treated or disposed at permitted facilities specially designed to receive the waste.
- Debris generated due to the demolition of existing structures shall be suitably re-used, to the extent feasible. The disposal of remaining debris shall be carried out only at sites identified and approved by local authorities.
- Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.
- All garbage, metals, used oils, and excess material generated during construction should be disposed in authorized areas incorporating recycling systems and the separation of materials.
- In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such debris and restore the affected area to its original state to the satisfaction of the PIU or delegated agencies and authorities.

Construction activities may pose the potential for release of small quantities of hazardous materials. The contractor should screen and assess the presence and contents of hazardous materials and petroleum-based products in building systems (e.g. PCB containing electrical equipment, lamps or lamp ballasts, used batteries, empty paint cans) and process equipment and remove them prior to initiation of construction activities, and manage their treatment and disposal according to Sections 1.5 and 1.6 on Hazardous Materials and Hazardous Waste Management, respectively in the World Bank Group's General EHS guidelines (www.ifc.org/ehsguidelines).

The installation of electronic equipment, disposal of equipment in the existing cooling systems of the NDC and DRC, as well as disposal of newly purchased IT equipment at the end of their useful life may result in the generation of electronic wastes (e.g. nickel-cadmium batteries and printed circuit boards from computer and other electronic equipment as well as backup power batteries). The operation of backup generators and service vehicles may also result in the generation of used tires, and waste oils and used filters. Transformer equipment may potentially contain Polychlorinated Biphenyls (PCBs) while cooling equipment may contain refrigerants (potential Ozone Depleting Substances [ODSs]). The benefited digital infrastructures operators shall handle all potential waste of their systems as per local requirements.

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Mongolia's hazardous waste classification list was approved in 2015 by the Government of Mongolia (GoM) Resolution No. 263.[1] Wastes from electrical equipment containing PCBs, HCFCs, HFCs, asbestos and other hazardous components are classified as hazardous waste.

Recommended hazardous materials management actions include:

- Implementing fuel delivery procedures and spill prevention and control plans applicable to the delivery and storage of fuel for backup electric power systems, preferably providing secondary containment and overfill prevention for fuel storage tanks;
- Implementing procedures for the management of lead acid batteries, including temporary storage, transport and final recycling by a licensed facility;
- Ensuring that new support equipment does not contain PCBs or ODSs. PCBs from old equipment should be managed as a hazardous waste;
- Purchasing electronic equipment that meets international phase out requirements for hazardous materials contents.
- Spill response procedures will be developed (including provision of absorbents at hazardous materials storage facilities), and all spills will be cleaned immediately.
- Providers of hazardous materials (if any) will be responsible for removing and or recycling them if they become wastes, either in Mongolia in licensed facilities if they become available, or through transport to a licensed facility in another country in the region. All exports of hazardous wastes must be with the review and approval of the MoET, and all necessary export licenses must be obtained.

In particular, hazardous wastes should always be segregated from nonhazardous wastes by both contractors and the benefited digital infrastructure operators. If generation of hazardous waste cannot be prevented through the implementation of the above general waste management practices, its management should focus on the prevention of harm to health, safety, and the environment, according to the following additional principles:

- Understand potential impacts and risks associated with the management of the hazardous waste during its complete life cycle
- Ensure that Contractors responsible for the handling, treating, and disposing of hazardous waste are reputable and legitimate enterprises, licensed by the relevant regulatory agencies and following good international industry practice for the waste being handled
- Ensure compliance with applicable local and international regulations.

Erosion Control:
The contractors shall reduce or prevent erosion by:

- Scheduling to avoid heavy rainfall periods (i.e., during the dry season) to the extent practical Contouring and minimizing length and steepness of slopes
- Mulching to stabilize exposed areas
- Re-vegetating areas promptly
- Designing channels and ditches for post-construction flows
- Lining steep channel and slopes (e.g., use jute matting)

[1] Hazardous waste classifications system in Mongolia, Resolution no. 263 dated 29 June 2015 signed by Prime Minister and Minister of MNET.

Maintenance:
Maintenance and future scaling-up activities will comply with good housekeeping policy and implement all actions and guidance prepared in this ECOP by the digital infrastructure operators.

2.8 Earthworks, Cut and Fill Slopes

During the upgrading of the benefited digital infrastructures, contractors shall implement following requirements where applicable:

- Minimize the area of soil clearance.
- Maintain slope stability at cut faces by implementing erosion control measures.
- All raw materials shall be sourced from a licensed entity.
- On site good soil maintenance practices:
    - Minimize the area of soil clearance.
    - Maintain slope stability at cut faces by implementing erosion protection measures.
    - Use temporary berms or other appropriate temporary drainage provisions to prevent stormwater runoff.
    - Dispose of spoil (if any) by a contracted qualified entity

2.9 Disposal of Construction and Vehicle Waste

All waste shall be picked up and handled by a contracted qualified entity at authorized areas, coordinated by the contractors. Waste removal agreements made with local permitted entity should be attached to the environmental management implementation report and submitted to the PIU by the contractor.

2.10 Safety during Construction

Emergency Procedures: The Contractor must ensure that emergency procedures are developed to facilitate effective actions in case of medical/fire emergency as well as environmental pollution (major spillage of gasoline, used oil, and/or toxic chemicals, etc.). The emergency procedure must contain emergency phone numbers and the method of notifying the statutory authorities. Contact numbers for the key staff of the contractor must also be included.

Fire Prevention and Control: All construction sites and associated accommodation or welfare facilities must have appropriate plans and management controls to prevent fires in place. The site fire plans must be prepared by the contractors and must have due regard to government regulations. During operation and maintenance of equipment and vehicles, the Contractor must ensure that its workers are well aware of the procedures and have enough knowledge to comply with them. The specification of non-combustible materials, products and packaging should be pursued wherever reasonably practicable. The Contractor must also comply with government requirements as may be appropriate at specific sites.

Operation of equipment: The Contractor must take all reasonable precautions to ensure that equipment is operated in a manner so as not to cause safety risk and/or nuisance to surrounding residents and occupiers. Operations of cranes and other large equipment must be closely supervised. Permission may be required.

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Accident prevention. 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 government safety requirements and any other measures necessary to avoid accidents, including the following:
Properly install notice signs/board at construction sites
If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;
Conduct safety training for construction workers prior to beginning work;
Provide necessary 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;
During emergencies of any kind, suspend all work.

2.11 Noise, Nuisance and Dust Control

To limit nuisance, dust and noise on construction sites, the Contractor should:

- Plan activities in consultation with the PIU and/or beneficiary agency and authorities, building owners, and/or local communities so that activities with a great potential to generate noise are planned during the periods of the day that should result in least disturbance.
- Use noise control devices, such as temporary noise barriers and deflectors for impact and blasting activities, and exhaust muffling devices for combustion engines.
- Avoid or minimize heavy project transportation through community areas
- To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
- Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.
- Implement particularly strict measures to prevent undesirable noise levels in sensitive areas (including in residential neighborhoods, near hospitals, etc.). In such areas, minimize the production of dust and particulate materials at all times, to avoid impacts on vulnerable people (children, elders).
- Selectively remove potential hazardous air pollutants, from existing infrastructure prior to demolition.
- Place dust screens around construction areas, provide fencing along the boundary so that emissions do not affect immediate neighbors, pay particular attention to areas close to housing, commercial areas, and recreational areas.
- Spray water periodically as needed on construction areas, especially at site located near residential area.

2.12 Demolition of Existing Infrastructure

In case the demolition of existing infrastructure, e.g. a power distribution room or a generator base, following requirement shall be adhere to:
Before demolition of the infrastructure, the civil works contractor should develop a demolition program and submit it to the construction supervision agency and digital infrastructure operators for approval. Dust prevention and control measures should be taken during the demolition including removal of cumulated dust, spraying water on the demolished structure and erecting fences. A site for stockpiling of garbage and debris should be designated on the construction site of demolition and

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the debris and construction waste should be removed out of site in a timely manner and transported along the approved route and within the approved time period to a designated disposal site.

2.13 Community Relations

To enhance adequate community relations, the Contractor shall:
Inform the local authorities and community about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, as appropriate;
Limit No construction activities at night.

2.14 Physical Cultural Property Chance-finds Procedures

As the minor civil works will be carried out in existing buildings, the project does not involve any civil works that could affect cultural heritages. In the unlikely event that physical cultural property chance-finds occur, responsible local authorities would be in charge of protecting and preserving any archeological sites, historical sites, remains and objects before deciding on subsequent appropriate procedures. Both contractor and the digital infrastructure operators should notify the responsible local authorities in charge of protecting and preserving archeological sites. The responsible local authorities will then assess the significance and importance of the findings 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. This could include changes in the lay- out (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage. If the Contractor discovers archeological sites, historical sites, remains and objects the Contractor and the digital infrastructure operator 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 take over;
- Notify the Supervisor who in turn should notify the responsible local authorities immediately (within 24 hours or less);
- Resume construction work after permission is given from the responsible local authorities concerning safeguard of the heritage.

2.15 Occupational health including COVID-19

1. OHS measures for workers during the installation of new digital infrastructures and rehabilitation of existing spaces in existing buildings as well as the minor civil works:

The contractors will implement good practice Occupational Health and Safety (OHS) measures including the use of Personal Protective Equipment (PPE) and emergency response procedures, developed in compliance with relevant GoM regulations and World Bank EHS Guidelines for Telecommunications.

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Occupational Health and Safety Monitoring: Training and monitoring should be designed by the contractor and implemented by accredited professionals contracted by the contractor and proof of training shall be attached to the environmental management plan report and submit to the PIU. As part of an occupational health and safety monitoring program. The contractor should also maintain a record of occupational accidents and diseases and dangerous occurrences and accidents.

Asbestos containing material: It is confirmed by the PIU that the asbestos or asbestos containing material were not used for the NDC and DRC during their construction or past renovation. The office refurbishment/ renovation works financed by this project should adopting non-asbestos materials. The use of asbestos containing materials Asbestos Containing Materials (ACM) should be avoided in new buildings or as a new material in remodeling or renovation activities.

Electrical safety for both contractors and digital infrastructure operators:

Recommendations to prevent, minimize, and control injuries related to electric shock include:

- All electrical installations should be performed by certified personnel and supervised by an accredited person. Certification for such work should include theoretical as well as practical education and experience;
- Strict procedures for de-energizing and checking of electrical equipment should be in place before any maintenance work is conducted. If de-energizing is not possible, electrical installations should be moved or insulated to minimize the hazardous effects;
- Prior to excavation works, all existing underground cable installations should be identified and marked. Drawings and plans should indicate such installations;
- All electrical installations or steel structures, such as masts or towers, should be grounded to provide safety as the electrical current chooses the grounded path for electrical discharge. In cases where maintenance work has to be performed on energized equipment, a strict safety procedure should be in place and work should be performed under constant supervision;
- Personnel training should be provided in revival techniques for victims of electric shock.

2. COVID 19 mitigation measures

Contractors will prepare a health and safety (H&S) procedure, which will be aligned with relevant government's regulations and guidelines on COVID-19 prevention and control, or with Bank's ESF/Safeguards Interim Note and WHO health guidance regarding COVID-19 in the future.[2] The procedure will include COVID-19 prevention and control measures, including disinfection/cleaning of construction sites, on-site temperature checks, social distancing measures, mandatory use of personal protective equipment such as facemasks, provision of handwashing stations and hand sanitizers etc., and procedures to be adopted in the event any worker is infected with COVID-19.

2.16 Environmental training and education

Training and education on environmental protection should include the following contents:

[2] See e.g.: World Health Organization. 2020. Considerations for public health and social measures in the workplace in the context of COVID-19. Geneva. Available at: https://www.who.int/publications-detail/considerations-for-public-health-and-social-measures-in-the-workplace-in-the-context-of-covid-19.

(1) Prior to the commencement of the Project, the PIU should assign an environmental specialist to provide environmental protection training for the contractors and construction supervision agencies of the small civil works;

(2) Prior to the commencement of the construction works, the contractor of the small civil works should organize training and examinations for the operators on the construction sites on laws and regulations on environmental protection and health and sanitation;

(3) The contractor of the civil works should organize staff training on the risk emergency response plan as well as emergency response rehearsal.

(4) The contractor of the civil works should organize occupational health training and physical examination on a half-year basis for operators handling toxic and hazardous substances and provide guidance to such operators on correct use of occupational disease prevention devices and personal labor protection devices.

(5) The civil works contractor should prepare a training plan to provide appropriate site briefing, dialogue toolkits, safety guidance to all employees and visitors. The training plan should also include details on training time and frequency.

(6) Environmental protection inspection system must be set up on the construction sites and inspection records should be properly maintained by the contractor and the PIU.

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Annex 1: Checklist for Environment Protection Inspection on Construction Sites

Instructions:

This table is the checklist for environmental protection inspections in the construction stage of the small civil works and includes the environmental protection measures tailored to the specific subprojects and the local environmental conditions, which may be added or adjusted if necessary.

Name of subproject: Contract No. and Subproject Location:

Name of construction site:

Current construction stage: inspection items		Inspection result ("√")			Notes / Recommended actions
		Yes	No	N/A	
I. General requirements	1.1 Are effective measures for prevention and control of air, water, noise, solid waste pollution and soil erosion and improvement of environmental sanitation included in the construction organization design of the Project?				
	1.2 Is an Environmental protection and environmental sanitation management and inspection system set up on the construction sites?				
	1.3 Are records kept of inspections of environmental protection and environmental sanitation management on the construction site?				
	1.4 Are necessary protective devices provided to the operators and effective measures taken for prevention and control of occupational diseases?				
	1.5 Are periodical physical examination and training organized for workers engaged in operations involving hazards of occupational diseases?				
	1.6 Does the education and training and assessment for operators on construction sites include contents of laws and regulations related to environmental protection and environmental health?				
	Others (please specify)				
II. Site arrangement and temporary facility construction	2.1 Is the construction area on the construction site clearly separated from the office area?				
	2.2 Is the construction area kept tidy and in good order?				
	2.3 Is the company name or company logo displayed at the entrance and exit of the construction sites? Is a project introduction bulletin board set up at obvious positions at the main entrance and exit?				
	2.4 Is land occupation involved in the newly constructed temporary buildings reasonable? Are the safety and fire protection requirements satisfied?				

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Current construction stage: inspection items		Inspection result ("√")			Notes / Recommended actions
		Yes	No	N/A	
	2.5 Is a special storage space provided for oils and chemical solvents stored in the construction sites? Are warning signs erected?				
	2.6 Is the floor in the warehouse of oils and chemical solvents subject to anti-seepage treatment? Are absorbing bags, sand and chips among other emergency response materials prepared in the warehouse?				
	Others (please specify)				
III. Working conditions and environmental safety	3.1 Are the construction sites enclosed with color steel fences at a height of not less than 2.5m and, in sensitive areas, not less than 3m?				
	3.2 Are acceptable bulletin boards erected on the construction sites to disclose information on the rules and regulations on environmental protection and civilized construction?				
	3.3 Does the construction contractor take protective measures to ensure the safety of buildings, structures and underground pipelines adjacent to the construction works?				
	3.4 Is a safety distance set for large and high scaffolds, tower cranes and other large mechanical equipment on the construction sites from overhead power transmission lines?				
	3.5 Are hard safety protection measures taken for sidewalks and vehicle entrances and exits in the vicinity of the construction works? Are lighting and indication devices provided at night?				
	3.6 Are visible safety warning signs complying with the national standard erected at dangerous positions on construction sites?				
	3.7 Are appropriate safety and technical measures taken on construction sites based on seasonal changes achieve the conditions of safe and civilized construction?				
	3.8 Are fire extinguishing devices properly maintained and the escape routes kept free of obstacles?				
	Others (please specify)				
IV. Dust pollution control	4.1 Are the existing or planned roads on and around the construction sites utilized to the best possibility as access roads on site?				
	4.3 Are materials on the construction site stockpiled in a centralized way?				
	4.4 Is the site for material stockpiling selected in a reasonable way?				
	4.5 Are the sites for storage and process of materials and storage of large formworks on the construction sites flat and solid?				
	4.6 Are dust-prone, fine and bulk materials stockpiled on the construction sites stored in an enclosed space and proper covering measures taken in the course of loading and unloading and transportation?				

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Current construction stage: inspection items		Inspection result ("√")			Notes / Recommended actions
		Yes	No	N/A	
	4.7 Are measures taken for proper covering, curing or greening for sites for centralized stockpiling of earth materials?				
	4.8 Are the soil spoils utilized in a comprehensive way or transported to designated places for disposal?				
	4.9 Is dust suppression carried out through water spraying on exposed surfaces in the office and living areas on construction sites? Are landscaping and beautification measures taken if needed?				
	4.10 Are earth, debris and construction waste transported using enclosed vehicles?				
	4.11 Are vehicle washing facilities provided at the entrances and exits of the construction sites?				
	4.12 Are pre-mixed concrete and pre-mixed mortar used on construction sites?				
	4.13 Are dust prevention and dust removal measures taken during operation of concrete and mortar mixing?				
	4.14 Are earthwork backfilling and transportation and other dust-prone construction activities prohibited in windy days with a strong wind of or above Grade 4?				
	Others (please specify)				
V. Emission control of hazardous gases	5.1 Is Burning of wastes prohibited on the construction sites?				
	5.2 Are the construction vehicles and plants maintained in excellent condition and tail gas emitted by such vehicles and plants complying with the national emission standards?				
	5.3 Are construction materials tested and accepted by lawful test bodies selected as the decoration materials?				
	5.4 Are bitumen, coal tar and similar anticorrosion and moisture proof treatment agents prohibited for wood panels and other wood materials used in the decoration works?				
	5.5 Are fume treatment facilities installed in kitchens in the living areas on construction sites according to the respective requirements?				
	Others (please specify)				
VI. Water pollution control	6.1 Are sedimentation tanks provided at sites for washing and cleaning of concrete mixers and transportation vehicles on the construction sites?				
	6.2 Is direct discharge of wastewater into the municipal sewage pipelines or rivers prohibited?				
	6.3 Is wastewater recycled or used for dust suppression after secondary sedimentation?				
	6.4 Are the temporary toilets and septic tanks provided on the construction sites subject to anti-seepage treatment?				
	6.5 Are drainage gutters provided on the construction sites and the wastewater discharged into the municipal sewage pipeline or natural rivers				

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Current construction stage: inspection items		Inspection result ("√")			Notes / Recommended actions
		Yes	No	N/A	
	after properly settled? Are the drainage ditches kept tidy and free of obstacles to assure smooth drainage?				
	Others (please specify)				
VII. Noise pollution control	7.1 Are the requirements of construction time strictly followed?				
	7.2 Are low-noise equipment selected and proper maintenance provided for equipment?				
	7.3 Are noise-generating equipment located on the far side from the residents?				
	7.4 Are the construction vehicles subject to measures of speed limit and honking prohibition?				
	7.5 Are noise-generating equipment (air compressors, power generators, etc.) located in an enclosed facility?				
VIII. Waste control	8.1 Are enclosed garbage stations provided on construction sites and construction wastes and domestic wastes stored separately and removed out of site in a timely manner?				
	8.2 Are construction wastes inside buildings removed out of the buildings in containers or via pipelines?				
	8.3 Are wastes generated from the activities of construction, demolition and site clearing separately treated and collected for reuse?				
	8.4 Does the construction waste transportation unit hold a waste digestion qualification certificate and business license granted by the concerned authorities?				
	8.5 Are waste oil and chemical solvents stored at a centralized place and handled by a qualified agency?				
	8.6 Are obvious oil spillage noticed of the construction equipment?				
	8.7 Are enclosed garbage stations provided in the construction camps for timely collection, removal and digestion of domestic solid wastes of staff according to the respective requirements?				
	8.8 Are all the solid wastes generated during construction fully removed after the construction is over?				
	Others (please specify)				
IX. Soil erosion control	9.1 Did the contractor hire a permitted waste handling entity?				
	9.2 Is attention paid to clearing and storage of top soil to make sure it is used for vegetation restoration after the construction works is completed?				
	9.3 Are interception and diversion ditches constructed to divert storm water formed in rain season and avoid runoff scours?				
	Others (please specify)				
X. Safeguarding of cultural properties	10.1 If any cultural relics and historic sites are discovered or suspected in the construction stage, the construction contractor shall immediately suspend the works and protect the site and submit a				

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Current construction stage: inspection items		Inspection result ("√")			Notes / Recommended actions
		Yes	No	N/A	
	report to the local cultural relics bureau for further action. The construction works shall not be resumed until an action is taken by the Cultural Relics Bureau.				
	Others (please specify)				
XI. Vegetation protection	11.1 Are there any activities of tree felling outside the construction area?				
	11.2 Is the layout of the construction sites reasonably optimized (judged based on the level of reduction of damages to vegetation from implementation of the construction works)?				
	11.3 Are effective measures taken in a timely manner against vegetation damaged and exposed surface resulting from the construction activities to avoid soil erosion and loss (e.g., covering the exposed surface with sand and gravels or planting fast-growing grass)?				
	11.4 Are the sites where original vegetation is damaged restored or reasonably landscaped upon the completion of the construction works?				
	Others (please specify)				
XII. Risk prevention	12.1 Is an accident prevention plan developed?				
	Others (please specify)				
XIII. Occupational health	13.1 Are warning signs or instructions provided at job positions and equipment or sites prone to occupational diseases and hazards on the construction site?				
	13.2 Do operators should wear earmuffs during high-noise operation to protect hearing?				
	13.3 Do operators working in sites involving toxic and hazardous gases wear gas masks or protective masks?				
	13.4 Do operators in dusty operation sites wear dust masks?				
	13.5 Do operators in welding operations wear protective masks, goggles and gloves and other personal protective equipment?				
	13.6 Are summer cooling supplies provided on construction sites where high-temperature operations are involved and reasonable work and rest timetable developed?				
	Others (please specify)				
XIV. Health and epidemic prevention	14.1 Are the respective health standards satisfied in terms of meals, drinking water, and rest places provided for staff on the construction sites?				
	14.2 Are toilets, sanitary facilities, drainage gutters and dark and humid areas sterilized on a periodical basis?				
	14.3 Are clinics provided on construction sites and equipped with health kits, frequently used drugs and bandages, tourniquets, neck care, stretchers and other first aid devices?				
	14.4 Are incidents of infectious diseases, food poisoning, acute occupational poisoning of the construction workers promptly reported to the local				

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Current construction stage: inspection items		Inspection result ("√")			Notes / Recommended actions
		Yes	No	N/A	
	health and epidemic prevention authorities and construction administration authorities so that corresponding actions are taken in accordance with the relevant provisions of the health and epidemic prevention authorities?				
	Others (please specify)				
XV. Traffic safety	15.1 Is safety education and training organized to particularly make the drivers aware of the importance of safe driving?				
	15.2 Are actions taken to limit driving time and make sure drivers drive in turns? Are actions taken to avoid driving on dangerous roads and time periods to minimize traffic accidents?				
	15.3 Are vehicles regularly maintained using manufacturer-approved spare parts, which should be purchased in a timely manner?				
	15.4 Are locally purchased materials used where possible to minimize transportation distance?				
	15.5 Are drivers mandatorily required to be licenses?				
	Others (please specify)				

Stage of inspection:

Date of inspection:

Time of inspection:

Checked by: (signature)

Supervision Engineer: (signature) _____

Notes:

(1) Information to be noted may include remarks on non-conforming situations observed on site, and recommended corrective or preventive actions.

(2) In the event of any unacceptable measures or situations requiring further improvement identified during site inspection, the Supervision Engineer may immediately issue an "Instruction on Environmental Protection Corrections" to the contractor and indicate the serial number of the Instruction herein. Details of corrective actions taken by the contractor need to be recorded separately.

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(3) This table is the checklist for environmental protection inspections in the construction stage of the small civil works and is applicable to the specific subprojects and specific environmental problems. This table may be adjusted, and corresponding measures of environmental protection may be taken, where appropriate, based on local environmental conditions and construction components.

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