



**Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity**

Ministry of Health

Department of Planning and Corporation

Lao PDR COVID-19 Response Project (P173817) and

Additional Financing and

Health Emergency Preparedness and Response

Multi-Donor Trust Fund (P175771)

**ENVIRONMENTAL and SOCIAL
MANAGEMENT FRAMEWORK (ESMF)**

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EXECUTIVE SUMMARY

BACKGROUND

1. The Government of Lao PDR (GOL), through the Ministry of Public Health (MOH) and its technical departments, has been implementing the Laos COVID-19 Response Project (P173817, the parent project) since March 2020 with support from the World Bank (WB). The parent project (US\$ 18 million) is being implemented through 3 components: Component 1 Emergency COVID-19 Response, Component 2. Strengthening System for Emergency Response, and Component 3. Project Management and Monitoring and Evaluation. Responding to GOL request, WB provides an Additional Financing (AF) to the Laos COVID-19 Response Project with funding of about US\$10 million IDA and US\$ 5 million of a regional Health Emergency Preparedness and Response Multi-Donor Trust Fund (HEPRTF). The AF contains activities which have been integrated into the three components of the parent project and a new Component 4 which has been added to facilitate the implementation of preparedness activities for emergency. The AF is extending activities planned under the parent project, and hence, “the Project” referred to in this document is consolidated of proposed AF (P175771)’s and its parent’s activities.
2. MOH has assigned the Department of Planning and Coordination (DPC) to be responsible for overall coordination and management of the parent project while the lead technical department includes Department of Communicable Disease Control (DCDC), Department for Food and Drugs (FDD), Department of Health Care and Rehabilitation (DHR), Department of Hygiene and Health Promotion (DHHP), National Center for Laboratory and Epidemiology (NCLE), and Center of Communication for Education and Health (CCEH) to be the lead agencies responsible for implementation of the parent project under the guidance of the Emergency Operations Center (EOC) (chaired by the minister of MOH) and the overall policy guidance of the COVID-19 National Taskforce, chaired by the Prime Minister. The Project Coordination Office (PCO) has been established by DPC to be responsible for overall planning and coordination. These implementation arrangements will continue to be applied to the Project. Moreover, specific committees and a task force will be established to be responsible for implementation of the National Deployment for Vaccination Program (NDVP) established by GOL in late February 2021.
3. This document is the Environment and Social Management Framework (ESMF) of the Project (P175771). It is developed as part of environment and social due diligence for the activities to be financed by the WB as required by the Environment and Social Framework (ESF). Of the ten Environment and Social Standards (ESSs) under the ESF, six standards are found to be relevant to the Project’s activities (ESS1, ESS2, ESS3, ESS4, ESS7, and ESS10). The Environment and Social Commitment Plan (ESCP), the Stakeholder Engagement Plan (SEP), and the ESMF of the parent project have been updated taking into account the progress and experience from implementation of the parent project and additional activities to be implemented under the AF budget. The main objective of the ESMF is to guide MOH and its technical department responsible for implementation of the Project (i.e. Project Implementing Entities or PIEs) to identify possible environmental and social risks and impacts of proposed activities and to develop and implement mitigation measures in compliance with the WB’s ESSs requirements.

PROJECT DESCRIPTION

4. The PDO of the Project has defined the same as for its parent project which is *to respond to the COVID-19 outbreak and strengthen national systems for public health emergency preparedness in Lao PDR*. With the AF, the Project will finance procurement and deployment of COVID-19 vaccine as well as strengthening health system for public health emergency preparedness while the parent project has been restructured to accommodate the requirement and situation of COVID-19 response in the country.
5. The proposed activities and components (new and restructured) of the Project are highlighted as follows while details are provided in the main text:
 - **Component 1: Emergency COVID-19 Response:** *increase in scope and cost from US\$ 12.83 million to US\$ 25.61 million including US\$ million from HEPRTF grants*. Original activities under Component 1 include: support of coordination on central and provincial levels; infection prevention and control; case detection, confirmation and contact tracing, environmental cleaning and disinfection activities; case management and isolation; quarantine; risk communication; and essential health service delivery. Based on the evolving needs for the emergency response, additional funding and donation received from partners, original allocations to some sub-components have been revised and reallocated to priority activities including vaccine deployment. Additional funds is added to existing Sub-component 1.4 (*Environmental cleaning and disinfection activities*) and Sub-component 1.7 (*Risk communication*) and two new Sub-components 1.10 (*Vaccine procurement*) and 1.11 (*Vaccine deployment*).
 - **Component 2: Strengthening System for Emergency Response:** *change in scope and cost from US\$ 3.67 million to US\$ 3.40 million*. The original activities under Component 2 include: capacity building and training of health personnel on treatment guidelines, and hospital infection control interventions; improving laboratory capacity; strengthening information system for surveillance; logistic management, warehouse management, and distribution; and improvement of treatment centers. The AF will expand three existing Sub-components 2.3 (*Strengthening information system for surveillance*), 2.4 (*Logistic management, warehouse management, distribution*), and 2.5 (*Treatment center*) including construction of new healthcare facilities in the 3 southern provinces for an Intensive Care Unit (ICU), isolation ward, and laboratory.
 - **Component 3: Project Management and Monitoring and Evaluation:** *increase in scope and cost from US\$ 1.5 million to US\$ 1.98 million*. Sub-component 3.1 (*Project management*) will support any additional technical staff required for management and monitoring with regard to vaccine procurement, cold chain strengthening and vaccination delivery support. It will also ensure development of community complaint and feedback mechanism on preventive information and vaccine provisions, as well as environmental safety measures. Sub-component 3.2 (*Monitoring and evaluation*) will support a beneficiaries' satisfaction survey, performance monitoring of vaccination program implementation and efficient utilization of project investments and lesson learn will be carried out as needed.
 - **Component 4: Strengthening Preparedness for Health Emergency:** *total new allocation is US\$ 2.0 million from HEPRTF*. The activities aim to increase resilience of the health system to prepare for public health emergencies in priority

geographical locations in Lao PDR. Sub-component 4.1 will enhance the health system and facilities for future emergencies including WASH services and medical waste management and review of roles, responsibilities, and standard operating procedures in emergency management operations and technical assistance for safe and resilient health facilities with enhanced emergency preparedness to withstand anticipated climate-related shock such as floods. Sub-component 4.2 will support the preparation for health emergencies and activities will include the ongoing COVID pandemic as well as providing a future legacy of preparedness to detect and respond to future major health threats including those caused or exacerbated by climate-change. Subcomponent 4.3 will estimate water and sanitation resources needed for a health emergency.

6. Vaccine purchasing will be done through Component 1 of the Global COVID-19 MPA (SPRP). Lao PDR will use option/options COVAX for vaccine purchase and financing mechanisms of COVAX AMC (for first 20% of doses), and IDA credits from the Project to pay for additional 734,000 doses to cover 5 percent of the population as well as cost of deployment to reach 50% coverage. The Project will finance upfront technical assistance to support GOL to establish institutional frameworks for the safe and effective deployment of vaccines as well as addressing emergency responses including strengthening capacity of key agencies to safely and effectively manage medical wastes, and development of community complaint and feedback mechanism on preventive information and vaccine provisions; environmental safety measures; beneficiaries' satisfaction survey; surveillance of vaccine adverse effects; data protection and safety of personal data.

POLICY, LEGAL AND REGULATORY FRAMEWORK

7. ***National policy and regulatory setting.*** This is considered adequate however capacity and budget are limiting to ensure effective implementation of many laws and regulations. At national, *key environmental and social legislations and institutional setting* include, but not limited to, the environment protection law, the EIA decree, the regulation on hazardous waste management, and others environmental quality standards and emission control standards while many are under reviewed and revisions. Ministry of Natural Resources and Environment (MONRE) is the lead ministry. There are also Guideline on Consultation with Ethnic Groups launched by Lao Front for National Development (2012) providing guidance and process of conducting consultation with all ethnic groups affected by both public and development projects which are largely in line with the ESS10: Stakeholder Engagement and Information Disclosure. Lao PDR is also a member of the Basel Convention, the Stockholm Convention, and other international conventions. Other sector ministries¹ and their provincial and districts offices (including Vientiane capitals and other cities) have also issued regulations and/or guidelines (under other laws) related to pollution control, waste management, health, and safety.
8. ***For health sector,*** GOL updated the Law on Health Care in 2014 while there are MOH

¹ Such as Ministry of Public Health (MOH), Ministry of Industries and Commerce (MOIC), Ministry of Public Works and Transport (MPWT), Ministry of Labor and Social Welfare (MLSW), Ministry of Energy and Mines (MEM), and Ministry of Planning and Investment (MPI).

regulations for implementation of health care specific issues include Sharp Waste Management Guidelines (2019), Law on Preventive Vaccination (immunization) (2018), Law on Prevention and Control of Communicable Disease (2017), Law on Health Care (2015), Decision on Healthcare Waste Management (2017), and Decision on hygiene condition of healthcare facilities (2018), and Law on Immunization (2018). A special Taskforce was set up at national, provincial, district and village levels for the emergency case such as COVID-19 pandemic. MOH is leading and coordinating the line ministries at all levels including other sectors and relevant local administrative authorities to implement all health-and COVID-19 related activities. *On vaccination programs*, FDD has established many policies, legislations, and guidelines related to medicines, vaccines and other health products.

9. ***In labor sector***, the new Labor Law (2013) applies to all employers, registered and unregistered employees, Lao employees working for foreign organizations, and foreign employees working within the Lao PDR. There are also mandatory obligations for all parties on Labor Occupational Health and Safety (OHS) to protect labor health and safety, and labor accident and occupational diseases. The Ministry of Labor and Social Welfare (MLSW) is the lead ministry. There are regulations identifying type of work with hazardous condition not be hired for workers younger than 18-years old and laws on Civil Servants (2016) and Decree on Code of Conduct for Civil Servants (2019), Law on Preventing and Combating Violence Against Women and Children (2006) and Panel Law (2017) contain provisions which are largely consistent with ESS2 and ESS4. These legislations provide regulations and measures to manage, prevent and address potential misconduct among civil servants including health workers and outsourced volunteers, community health and safety issues and risks associated with Sexual Exploitation and Abuse (SEA), Gender-based Violence (GBV) and Violence Against Children (VAC) that may occur under project. The Lao government has also ratified a number of ILO conventions, including on forced labor, child labor, minimum age and equal remuneration.
10. ***GOL's response to CIVID-19***, Lao PDR has been taking action to prevent COVID-19 pandemic and the number of COVID-19 affected population is much lower than other neighboring countries. *On vaccination and deployment*, in late February 2021, MOH has developed a National Deployment and Vaccination Plan (NDVP) for COVID-19 vaccines to ensure a fair, equitable and inclusive policy for in-country vaccine access and allocation be developed and implemented.
11. ***WB's Environmental and Social Risk Classification and Management***. As activities are consolidated (from both AF and parent project), the environmental and social risk is classified as 'Substantial' for the Project. The ESMF requires an ESS screening to determine eligibility and activities/subprojects, possible ESS risks and impacts, and identify mitigation measures proportioned to the risk and impact. All mitigation measures will be prepared by MOH and submitted to WB for clearance before the implementation. GOL approval of the activities and/or subproject will also be needed. The ESMF and its eight annexes also provide guidance for preparation of an Environment and Social Management Plan (ESMP) focusing on mitigating the safety risks due to vaccines deployment and infectious and hazardous wastes through the application of Infectious Control and Waste Management (ICWMP), Infection Prevention Control (IPC), and Healthcare Waste Management (HCWMP), Labor Management Procedures (LMP), and environment and social Code of Practices (ESCOP) taking into account GOL regulations

and guidelines and the recent guidelines provided by the WBG in response to COVID-19. Due consideration has also been given to ensuring that individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable, have access to the development benefits resulting from the Project. This ESMF is connected to the SEP and formed part of MOH obligations stated under the ESCP and contains guideline for other specific E&S management plans to be prepared during implementation of the Project. The National Immunization Law (Article 15) stipulates that citizens will be immunized on a voluntary basis. COVID vaccines will not be subject to mandatory/forced vaccination.

ENVIRONMENTAL AND SOCIAL BASELINE

12. Lao PDR is a land-locked lower-middle-income country that shares borders with countries affected with outbreaks of COVID-19, such as Thailand, Vietnam, Cambodia, Myanmar and especially China. The majority of its population of 7.1 million live in rural and remote areas with challenges in communications, transport, and service provision. According to the latest survey results, 18.3 percent of the total population are living below poverty². The global COVID-19 outbreak will have a significant negative impact on Lao PDR's economy, which already suffers from structural vulnerabilities. Most Lao businesses are small and medium-sized enterprises, which are especially vulnerable to economic disruptions. Given the current outbreak worldwide of the COVID-19 pandemic, the returning Laos migrant workers and students from other countries, including highly effected neighboring countries such as Thailand, China, and Europe, there is increased vulnerability to the already weak healthcare system in Lao PDR. As of May 1, 2021, Lao PDR has reported 821 laboratory confirmed cases and no deaths from COVID-19.
13. ***On vaccination program***, the NDVP defines the processes and structures required for deployment of COVID-19 vaccines and related supplies and subsequent rapid vaccination of target population building on the existing structure and procedures being implemented under the National Immunization Program (NIP) of the Mother and Child Health Centre (MCHC) at the DHHP of MOH which was developed in collaboration with WHO. The FDD of MOH is the National Regulatory Authority responsible for developing regulations and legal pathways for expedited authorization for use and importation. The overall planning and coordination of the deployment and vaccination operations will be managed by the Incident Manager and supported by the Focal Points for Vaccination and Logistics. The NDVP also identified key regulatory and institutional setting to ensure effective implementation of the program as well as policy on target population, vaccination delivery strategies, supply chain management and healthcare waste management, human resources management and training, vaccine acceptance and demand generation, vaccine safety monitoring and management of adverse event following immunization (AEFI), immunization monitoring system, COVID-19 surveillance, and evaluation of introduction of COVID-19 vaccines. Key messages of the NDVP regarding the implementation arrangement, public communication activities and risk communication strategies, post-deployment surveillance activities, and waste management are highlighted in the main text while more details on cold chains capacity assessment, vaccines safety risks, training, etc. are provided in Annex VIII.

² The poverty rate from the latest Lao Consumption and Expenditure Survey has yet to be made publicly available.

14. ***GOL/MOH Capacity and E&S Implementation Experience.*** The WB and other development partners have been providing technical and financial support to build GOL capacity to address pandemic and health issues during the past 15 years and recently for the response to COVID-19. MOH is responsible for coordination and implementation of these projects and has experience implementing several WB financed projects including the application of WB safeguard policies including the on-going Health Governance and Nutrition Development Project (HGNDP, P151425), Health and Nutrition Service Access Project (HANSA, P166165), and the LCRP (P173817). The HGNDP and HANSA apply the WB Safeguard Policies while the LCRP is the first health related-project that applies the ESF.
15. ***ESF implementation experience of the parent project.*** Prior to the preparation and implementation of the parent project, the Project Implementing Entity (PIE) of MOH including PCO of DPC had limited capacity and experience on the implementation of ESF. However, extensive discussion and implementation support has been provided by WB team since March 2020. In September 2020, the first ESF consultant (ESFC) was mobilized and has been on board. The second ESFC has been on board in mid-February 2021. While the consultants and PCO still need support from the WB ESF team, their capacity and knowledge on ESF implementation has been improved. Initial reviews of proposed activities for the parent project suggested that seven national PIEs have been assigned for implementation of project activities while discussion on the plan on construction of new small healthcare facilities (HCF) and rehabilitation and/or improvement of water supply, sanitation, hygiene (WASH) including wastewater treatment of existing hospitals and HCFs has been initiated. Given that the activities will apply different level of ESF instruments and only those that are related to construction of new HCFs and/or operations of HCFs, laboratory, and/or vaccination that will generate significant amount of infection, toxic/ hazardous, and/or medical wastes will require the preparation of an ESMP including ICWMP, IPC, HCWMP, LMP, SEP and/or ESCOP. Mobilization of national consulting firm and/or qualified consultants may be necessary to ensure that the facilities are properly designed and documents are prepared for WB clearance before bidding.
16. For practical reasons, it has been agreed that each PIE will be treated as a subproject and an ESS screening of the activities to be implemented by each PIE will be submitted to WB for clearance. The two ESFCs will also provide training on the ESF implementation especially those related to ESMF, ESMP, SEP and LMP application and also responsible for supervision, monitoring, and preparation of ESF implementation monitoring report to WB. The ESFCs will help to prepare and review adequacy of all ESF documents and ensure full compliance of the Project activities with ESS requirements.

POTENTIAL ENVIRONMENT AND SOCIAL RISKS AND MITIGATION

17. ***Environmental and Social Risks and Mitigations.*** The Project will finance procurement of goods, vaccines and its deployment, services, technical assistance, and incremental cost considered necessary for responding to COVID-19 outbreaks as well as construction of new one-story building for HCFs and other small works such as toilets, washrooms, and retrofitting of existing water supply, sanitation, and health (WASH) facilities in

priority HCFs. The ESS risks are likely to range from low to substantial. Key issues and mitigation measures are briefly summarized as follows, details are in the full text and annexes of the ESMF:

- *New construction and/or renovation of civil works to improve healthcare facilities (HCF).* Key risks are (a) Inappropriate design of the HCFs including laboratory, quarantine, isolation and treatment centers that does not meet technical requirements and good ventilation may increase the risks of spreading COVID-19 to health personnel, workers, and general public, especially those disadvantage groups including elderly and disabilities; (b) Safety risks to workers and general public and negative impacts during construction and/or renovation works due to dust, noise, vibration, wastes, including those related to asbestos containing materials and borrow pits; and (c) Possible non-compliance with the 2013 labor law and WB ESS2. Key measures are MOH will plan and implement all required measures identified in the ESMP including those related to ICWMP, IPC, HCWMP, LPM, and ESCOP and ensuring effective management of contractor and provide guidance on consultation with the local community and vulnerable ethnic group.
- *Operations of existing and/or new HCFs and other emergency response (ER) services including vaccination program.* Key risks are (a) Safety risks of health personnel, workers, and general public due to increasing generation of hazardous/toxic, chemical and other medical wastes, especially those contaminated with COVID-19; (b) Improper collection, transport, treatment and disposal of these wastes due to poor sanitation and improper management of wastewater related to COVID-19 and weak compliance with the precaution measures for infection prevention and control in isolation and treatment of COVID-19 infectious cases; and (c) Inadequate access to health services and/or possible social discrimination/stigmatization against some vulnerable groups (especially the poor, elderly or those with pre-existing medical conditions and religious minority groups) and other specific social risks. Key mitigation measure are (i) MOH, especially all hospitals and laboratories, will plan and implement mitigation measures identified in the ESMP and (ii) plan and implement the communication strategies identified in the Stakeholder Engagement Plan (SEP) especially for those related to vaccination program while more details are provided in ESMF main text and annexes, especially when the vulnerable ethnic groups³ are present in the activity/subproject area.
- *Procurement of goods, services, and supplies.* Key risks are (a) Surfaces of imported materials may be contaminated and handling during transportation may result in COVID-19 spreading while incorrect standards or quality of PPE, inadequate handwashing facilities, and alcohol-based hand rubs may not be as affective at controlling infection as hand washing with soap and water while (b) A non-transparent and poorly managed distribution system and practice could worsen the current shortage situation, affecting the maximum and efficient use of resources may create limited access of disadvantaged and vulnerable population groups. Key mitigation measures are (i) MOH will plan and implement mitigation measures identified in Annexes III and IV of ESMF and (ii) ensuring that wastes from vaccination programs or treatment and hazardous materials used and generated during the provision of COVID-19 diagnosis, care and treatment services are properly dealt with and do not lead to further infection.
- *TA & Capacity Building.* Key risks are (a) Information, advice, guidance and

³ In Lao PDR, the vulnerable ethnic groups are belonging to the Mon-Khmer, Hmong-Iu or Iew Mien and Chino-Tibet ethnic family groups

training are not updated regularly as more becomes known about how the virus responds to treatment and is transmitted and how the vaccine should be delivered and which groups should be prioritized and (b) Provision of support to the disadvantaged vulnerable groups, including vaccination, does not meet the needs of these group, does not reach them, and/or is not well targeted, culturally appropriate, accessible or in a manner that is understandable to disadvantaged or vulnerable groups. Mitigation measures are (i) MOH will plan and implement mitigation measures identified in Annexes III and IV of ESMF and (ii) apply the SEP as the guiding document in terms of communication and outreach strategies and consultations.

- *Nationwide procurement and deployment of COVID-19 vaccines* will create addition risks identified above due to increasing generation of and ineffective management of wastes and communications, especially to vulnerable groups, as well as those related to storage, handling, and transportation of vaccines, risk of adverse reactions to the vaccines, and risks to more people involved in the vaccination process and local communities while availability of medical supplies and PPE may be inadequate. Mitigation measures are MOH will plan and implement mitigation measures identified in Annexes III, IV and V of ESMF.

PROCEDURES TO ADDRESS ENVIRONMENT AND SOCIAL ISSUES

18. This ESMF procedure comprises 5 steps: (1) E&S screening form and ineligible activities; (2) preparation of E&S management instruments and plans including consultation and information disclosure; (3) WB review and clearance of E&S documents (as required); (4) Information disclosure of E&S documents; and (5) Implementation, monitoring and reporting (M&R). The Project will not finance any activity that is considered by the WB as “High Risk” especially those expected to cause significant loss or degradation of critical natural habitats; adversely affect forest and forest health or sites with physical cultural resources; and/or create adverse impacts on involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households’ use of land and livelihoods. No land taking and resettlement will be allowed for new construction under the Project. The activities that temporary or permanent impact on land or livelihood will be screened out.
19. The activities with moderate and/or substantial risks, especially those related to new construction and/or renovation of HCFs including installation and/or rehabilitation of WASH facilities, will require measures to mitigate risks and negative impacts during planning and design, construction, and operations of the HCFs. Guidance for the preparation of the follow-up ESS instruments such as the ESMP, ICWMP, LMP, and ESCOP are provided respectively in Annexes III, IV, V, and VI of ESMF. All site-specific measures described in the ESMP will require WB review and clearance before implementation of the Project activities/subprojects.
20. The Project activities relating to vaccination, in particular the vaccine deployment plan and communication strategies, will take into account the risks and mitigation measures outlined in this ESMF in order to incorporate it into the design. The SEP will also be a guiding document in the design of vaccine-related activities (procurement, delivery, training, communications, etc.).

CONSULTATION AND DISCLOSURE

21. Consultation and information disclosure is part of the stakeholder engagement discussed in more details in the Stakeholder Engagement Plan (SEP). During November 2020 to March 2021 consultation on the detailed work plan of the parent project were conducted in selected provinces while consultation and disclosure of the draft ESF documents for the AF (ESMF, SEP, and ESCP) were disclosed and consulted with key agencies in Vientiane capacity on 23 March 2021. Key participants were from DPC, DCDC, DHR, FDD, NCLE, CCEH, DOF, DHHP Office. Results from the consultations suggested that the main concerns raised are centered around management of medical waste which may result in contaminating the environment, spreading the virus and thus increasing risks for community and health workers as well officials working around quarantine's facilities and possible discrimination attitude towards health professionals in the community. Other points of concern relate to limited knowledge among some health professionals on how to use medical equipment, particularly frontline staff working on sample testing in laboratories and ability to understand foreign languages used in instructions for medical equipment and chemicals, as well as their mental health status which needs to be assessed and supported on a regular basis.

STAKEHOLDER ENGAGEMENT

22. A SEP for the parent project has been for the Project. The SEP defines a program for stakeholder engagement, including public information disclosure and consultation, throughout the entire project cycle. It also outlines a communication strategy with the project stakeholders, and offers mechanisms for them to raise concerns, provide feedback, or complaints about the project. While activities under Component 1 of the Project, especially those related to vaccination, deals with communication materials and reaches out to communities, the Stakeholder Engagement Plan deals with all project components as it seeks to ensure stakeholders are consulted and well-informed about the project and have avenues to provide their feedback. The SEP identifies all project stakeholders including their priorities and concerns, and ensure the project has ways to incorporate these; identifies strategies for information sharing and communication to stakeholders in ways that are meaningful and accessible; specifies procedures and methodologies for stakeholder consultations, documentation of the proceedings and strategies for feedback; establishes an accessible, culturally appropriate and responsive grievance mechanism, and develop a strategy for stakeholder participation in the monitoring of project impacts.
23. The SEP also identifies a reporting Back to Stakeholders and a Grievance Redress Mechanism (GRM) under the Project. The parent project and the AF incorporate a project wide GRM which enables stakeholders to channel concerns, questions, and complaints to the various implementation agencies and COVID-19 Call centers (hotline call-in number 166 and 165). The project supports the COVID-19 Call Centers with hotline call-free numbers. These numbers have been publicly disclosed throughout the country in the broadcast and print media.

24. Traditional grievance systems are also in place, with grievances handled at each municipal/provincial referral hospitals and from the village up to national levels through the existing Village Mediation Unit or Committee. These same mechanisms will be used to deal with vaccine-related complaints, and these mechanisms will be updated as needed to ensure it is being responsive to needs.

INSTITUTIONAL ARRANGEMENTS AND CAPACITY BUILDING

25. ***ESMF implementation arrangement and responsibility.*** Similar to the parent project, MOH through its DPC and the technical departments will work closely with other ministries and the provincial authorities especially the Provincial Health Offices (PHO), District Health Offices (DHO), and Health Centers (HC) to implement the ESMF. The Project Coordination Office (PCO) of DPC will be responsible for overall coordination, supervision, and M&E of the ESMF implementation. Two ESF consultants (ESFC) have been mobilized and are on board. The committee and tasks force responsible for the vaccination program will be involved in development of policy and plan for vaccination while the MCHC of DHHP will lead the implementation of vaccines procurement and deployment while FDD will be the regulator.
26. ***Training and technical assistance.*** An ESMF training and capacity building plan was prepared as part of the ESMF of the parent project. However, implementation of the training plan and the ESS screening of activities identified under the parent project have been delayed due to the need to shift priority of the PCO and ESFC team to prepare the ESF documents and complete consultation during March and April 2021 for the Project preparation. The training and capacity building plan is also included in this ESMF and it will be implemented in June 2021. Two ESF consultants have been on board to provide required support for PCO and PIEs to implement the ESF instruments.
27. With the AF, additional activities related to measures to address communication risks has been incorporated into the activities and additional budget has been provided including a grant funding from a regional trust fund (HEPRTF) for strengthening health facility and lifeline infrastructure for health emergency preparedness in Lao PDR.
28. ***ESMF Implementation Budget.*** The ESMF implementation budget comprises of (a) cost for revision and/or update of ESF documents including consultation with local authorities and communities; (b) cost for implementation of the ESMP, ICWMP, IPC, and/or HCWMP; (c) cost for supervision, monitoring, and training workshops on ESS issues, including supervision of works and monitoring of ESMP, ICWMP, ESCOP, SEPs, LMPs (if requested by WB); (d) cost for hiring of qualified (individual or firm) consultants to assist PCO and the implementing entities to coordinate and implement the ESMF including training and preparation of reports; and (e) cost for implementation of ESCOP which will be included as part of the construction cost.
29. Given that the mitigation measures have been integrated into project activities during project design, most of the ESMF implementation budget has been integrated into the component costs. Under Components 1 and 2, a budget of about US\$1.87 million will be used for medical equipment, medical supplier, training, and disinfection activities while about US\$2.25 million is allocated to protect OHS risk. Under Component 3, US\$0.30 million allocated for hiring of ESF consultants (US\$0.2 million) and ESF

implementation (US\$0.1 million). With the AF, additional budget of US\$0.24 million has been allocated to mitigate communication risk due to vaccination (Activity 1.7) and US\$0.36 million for additional project management and M&E including AEFI surveillance. Cost for vaccine deployment will also include safety, vaccine delivery, and post-deployment survey (AEFI) while the HEPR-TF budget (US\$2 million) will be used to strengthen health facilities for health emergency preparedness in Lao PDR.

Section 1. Background

1. Lao PDR is a land-locked lower-middle-income country that shares borders with countries affected with outbreaks of COVID-19, such as Thailand, Vietnam, Cambodia, Myanmar and especially China. The majority of its population of 7.1 million live in rural and remote areas with challenges in communications, transport, and service provision. According to the latest survey results, 18.3 percent of the total population are living below poverty⁴. The global COVID-19 outbreak will have a significant negative impact on Lao PDR's economy, which already suffers from structural vulnerabilities. Most Lao businesses are small and medium-sized enterprises, which are especially vulnerable to economic disruptions. Given the current outbreak worldwide of the COVID-19 pandemic, the returning Laos migrant workers and students from other countries, including highly effected neighboring countries such as Thailand, China, and Europe, there is increased vulnerability to the already weak healthcare system in Lao PDR.
2. The World Bank (WB) Group has created a dedicated, COVID-19 Fast Track facility to help developing countries address emergency response of the outbreak. The Government of Lao PDR (GOL) is implementing a project called Lao PDR COVID-19 Response (LCRP, P173817) valued of about US\$ 18 million from this facility to combat the COVID-19 pandemic in Lao PDR. The LCRP was approved by the WB Board on 06 April 2020 and is effective on 07 April 2020⁵. The GOL through the Ministry of Health (MOH) is implementing the parent project in close coordination and cooperation with the Prime Minister Office (PMO), the Ministry of Finance (MOF), Ministry of Planning and Investment (MPI), and provincial authorities especially the Provincial Health Offices (PHO), District Health Offices (DHO), and Health Centers (HCs).
3. As of May 1, 2021, Lao PDR has reported 821 laboratory confirmed cases and no deaths from COVID-19. According to the WHO, Lao PDR has transmission category of "imported/sporadic cases" until middle of April 2021 and being locally acquired transmission since then. MOH maintains that Lao PDR is at high risk, given the proximity and links with countries heavily affected by COVID-19, and the limited response capacity to a widespread outbreak, including community transmission. The continues lockdown in the country and closing of the border has negatively impacted the economy.
4. On April 12, 2021 GOL requested additional funds, in the amount of US\$10 million, to expand the deployment of COVID-19 vaccine while the WB has mobilized US\$ 10 million from IDA loan and US\$ 5 million grants from a regional trust fund namely the Health Emergency Preparedness and Response Umbrella Program (HEPR-TF) to provide additional support through an additional financing (AF) of LRCR (the parent project). Appraisal and negotiation for the AF was conducted during 12-17 May 2021 while approval by the WB Board is expected in June 2021.

⁴ The poverty rate from the latest Lao Consumption and Expenditure Survey has yet to be made publicly available.

⁵ This Project is part of the COVID-19 Strategic Preparedness and Response Program (SPRP) which was approved by WB Board on 17 March 2020. The SPRP using the Multiphase Programmatic Approach (MPA) with a financing envelop of US\$2.7 billion IBRD and US\$1.3 billion from IDA Crisis Response Window approved by the Board on March 17, 2020. The MPA Program development objective is to prevent, detect and respond to the threat posed by COVID-19 and strengthen national systems for public health preparedness.

5. This document is developed to support the environment and social due diligence for the activities being financed by the WB under the LCRP parent project and revised for its additional financing (AF) or together referred to as “the Project”. The same as the parent project, the WB’s Environment and Social Framework (ESF) will be applied to the Project. Of the ten Environment and Social Standards (ESSs)⁶ six standards are found to be relevant to the AF (ESS1, ESS2, ESS3, ESS4, ESS7, and ESS10). As part of the Environment and Social Commitment Plan (ESCP) of the AF, MOH through its Department of Planning and Coordination (DPC) committed to update the ESMF and the Stakeholder Engagement Plan (SEP) of the parent project and submit to WB before AF appraisal. This ESMF is thus prepared in compliance with the ESCP requirement to provide guidance and principles to identify Environmental and Social Standard (ESS) risks and mitigation measures during the implementation of the Project activities. This ESMF, which updates the ESMF of the parent project, taking into account the implementation progress of the parent project and the additional activities of the AF and it is consistent with the standard template for COVID-19 AF provided by the WB.
6. The main objective of the ESMF is to guide the MOH and its technical departments responsible for implementation of Project activities and is considered to be the Project Implementing Entities (PIEs). The ESMF identify possible ESS risks and impacts as well as to develop and implement mitigation measures during Project implementation, including the relevant activity/subproject-specific plans that would be developed in compliance with the WB’s ESSs that are found to be relevant to the AF. Specifically, the ESMF aims to: (a) assess the potential ESS risks and impacts induce from proposed AF activities (both positive or negative), and propose mitigation measures which will effectively address these risks/impacts; (b) establish clear procedures for the ESS planning, review, approval, implementation, and monitoring and reporting of activities/subprojects, technical assistance, and other activities to be financed under the AF; (c) describe specific mechanisms for public consultation and disclosure of ESS documents as well as redress of possible grievances; and (d) specify roles and responsibilities of agencies responsible for implementation of the proposed ESS measures including identification of priority training, capacity building, technical assistance, and the ESMF budget. The Project description and the implementation progress are provided in Section 2.
7. Scope and application of this ESMF is also the same to the parent project. It includes an ESS screening to determine eligibility and activities/subprojects with ESS risks and identify potential ESS issues and activity/subproject-specific instruments (plans) to be prepared and submitted to WB for clearance and/or to GOL for approval as needed. The ESMF also provides guidance for preparation of an Environment and Social Management Plan (ESMP) focusing on mitigating the safety risks due to vaccines deployment and infectious and hazardous wastes through the application of infectious control and waste management (ICWMP) as well as infection prevention control (IPC) in line with the MOH regulations and guidelines and the recent guidelines provided by the WB in

⁶ The ESF ten ESSs are: ESS1 (Assessment and Management of Environmental and Social Risks and Impacts), ESS2 (Labor and Working Conditions), ESS3 (Resource Efficiency and Pollution Prevention and Management), ESS4 (Community Health and Safety), ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement), ESS6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources), ESS7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities), ESS8 (Cultural Heritage), ESS9 (Financial Intermediaries), and ESS10 (Stakeholder Engagement and Information Disclosure).

response to COVID-19. Due consideration has also been given to ensuring that individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable, have access to the development benefits resulting from the Project. This ESMF is connected to the SEP, the ESCP, and other specific plans to be prepared during implementation of the Project. This ESMF will be applied to all Project activities (works, goods, vaccines procurement and deployment, and other related services including technical assistance and research activities) to be financed by the Project.

8. Section 2 provides Project description while Sections 3 and 4 respectively present policy and legal and institutional setting and ESS background relevant to the Project with minor update on GOL policy and regulations relate to COVID-19 vaccination and deployment which is the focus of the AF. Section 5 describes the potential risks and impacts of Project activities/subprojects and proposed mitigation and management measures while Section 6 provides procedures on preparation of an ESMP, Infection Control and Waste Management Plan (ICWMP), Infection Prevention and Control (IPC), Healthcare Waste Management Procedure (HCWMP), Labor Management Procedure (LMP), and Environment and Social Code of Practices (ESCP) which comprises an Environment Code of Practice (ECOP) and Social Code of Conduct (SCOC) focusing on gender-based violence (GBV) and violence against children (VAC). Sections 7 and 8 provide guidance on consultation, disclosure, and stakeholder engagement including Grievance Redress Mechanism (GRM) while Section 9 identifies the implementation arrangement and capacity building. More details are provided in annexes.

Section 2. Project Description

2.1 PDO and Description

9. The Project development objective is the same as that of the parent project i.e. *to respond to the COVID-19 outbreak and strengthen national systems for public health emergency preparedness in Lao PDR*. The parent project components and activities are designed to support critical gaps identified through the National Preparedness and Response Plan for COVID-19 and key components are: Component 1. Emergency COVID-19 Response; Component 2. Strengthening System for Emergency Response; Component 3. Project Management and Monitoring and Evaluation. Under the AF, additional activities and budget related to vaccination and deployment have been added into these three components while the HEPRTF grants of about US\$ 3 million have been added into Component 1 for vaccines deployment and US\$ 2 million for the new Component 4 (*Strengthening Preparedness for Health Emergency*). To accommodate the AF, budget allocations of the parent project have also been adjusted to accommodate construction of new HCFs in the 3 southern provinces. Brief description of the Project components and the proposed change of activities and budget are provided in Tables 2.1 and 2.2, respectively. The overall Project activities and the Project area and beneficiaries are provided in Sections 2.2 and 2.3, respectively.
10. **Component 1: Emergency COVID-19 Response: increase in scope and cost from US\$ 12.83 million to US\$ 25.61 million.** Original activities under Component 1 included: support of coordination on central and provincial levels; infection prevention and control; case detection, confirmation and contact tracing, environmental cleaning and disinfection; case management and isolation; quarantine; risk communication; and essential health service delivery. Based on the evolving needs for the emergency

response, additional funding and donation received from partners, original allocations to some sub-components have been revised and reallocated to priority activities including vaccine deployment (see Tables 2.1 and 2.2).

- ***Sub-component 1.4: Environmental cleaning and disinfection activities*** (total new allocation US\$ 1,874,000, including US\$ 74,000 reallocation from the parent project). This sub-component finances COVID-19 preventive and disinfection activities related to waste treatment and infected wastes management at the community level. Activities will be expanded to include the COVID-19 vaccine waste management at point of services, and improve sharp waste management, which includes but is not limited to (a) provide basic knowledge on IPC, infectious and sharp waste management on-site (separation, storage, labelling, onsite transport and treatment, etc.); (b) good water supply and sanitation (washing and toilets); and (c) adequate cleaning chemicals and properly fitting PPEs for male and female workers working on waste management.
- ***Sub-component 1.7: Risk communication*** (total new allocation US\$ 441,880, including US\$ 245,000 from AF). This component will be expanded with evidence-based, strategic communication activities to raise public awareness on the rationale for vaccinating selected target populations, vaccine safety and vaccine deployment process; to address misinformation and vaccine hesitancy to build confidence and trust in vaccines, reduce stigma, fears and misconceptions around COVID-19 vaccine such as causing fertility problems; and create demand for and positive attitude and behavior towards the vaccines among the public. A mass communication campaign tailored to the context of Lao PDR will be implemented through multiple communication channels based on the findings and recommendations from the recent Media Audit in Lao PDR done by the World Bank. This includes community announcement, broadcasting on radio and TV programs, and social media, such as Facebook and WhatsApp to ensure that no segment of the population is left out of communication campaign targeting, including persons with a disability, ethnic minorities, age groups, etc., who are also the most vulnerable groups against climate change.
- ***New Sub-component 1.10: Vaccine procurement*** (total new allocation US\$ 5,138,636, all from IDA). This sub-component will support the procurement of COVID-19 vaccines that meet the following criteria: (i) the vaccine has received regular or emergency licensure or authorization from at least one of the SRAs identified by WHO for vaccines procured and/or supplied under the COVAX Facility, as may be amended from time to time by WHO; or (ii) the vaccine has received WHO Prequalification (PQ) or WHO Emergency Use Listing (EUL).
- ***New Sub-component 1.11: Vaccine deployment*** (total new allocation US\$ 7,680,432, including US\$ 7,123,364 from AF [US\$ 4,123,364 from IDA; US\$ 3,000,000 from HEPRTF] and US\$ 557,068 reallocation of the parent project). The sub-component will finance a set of activities for vaccine deployment, including (a) training of health staff on vaccine delivery and security; (b) vaccine roll-out, (c) management of adverse event following immunization (AEFI); and (d) management, supervision and monitoring of the vaccine deployment. This sub-component will support health human resources and provision of supplies required for vaccine roll-out through fixed site and outreach/mobile delivery according to the deployment plan to ensure to reach target groups in remote and rural communities where the outreach/mobile delivery modalities will be selected with

climate friendly as a key consideration. TA can be provided to support optimization for vaccine delivery to adopt ICT, minimize vaccine wastage and reduce travel distance.

11. **Component 2: Strengthening System for Emergency Response: *change in scope and cost from US\$ 3.67 million to US\$ 3.40 million.*** The original activities under Component 2 included: capacity building and training of health personnel on treatment guidelines, and hospital infection control interventions; improving laboratory capacity; strengthening information system for surveillance; logistic management, warehouse management, and distribution; and improvement of treatment centers.
 - ***Sub-component 2.3: Strengthening information system for surveillance (total new allocation US\$ 200,000).*** The original activities supporting the COVID-19 surveillance system will continue. Activities will be expanded to enhance a system for vaccine registry and for monitoring of AEFI while data protection and safety of personal data will be ensured. This may include engaging partner organizations, especially UNICEF and WHO, in various roles.
 - ***Sub-component 2.4: Logistic management, warehouse management, distribution (total new allocation US\$ 562,300, including US\$ 332,200 reallocation and US\$ 30,000 from AF).*** Activities will be expanded to include transportation of vaccines and maintenance of the cold chain system which will be climate friendly and vaccine storage room which will be repaired with energy efficiency incorporated.
 - ***Sub-component 2.5: Treatment center (total new allocation US\$ 2,388,175 including US\$ 1,054,500 from revised parent allocation and US\$ 1,333,675 reallocation).*** Construction of three new simple isolation facilities of approximately 1800 m² each on three existing public hospital sites. The facilities will each have an Intensive Care Unit (ICU), isolation ward, and laboratory. Under the original project, retrofitting of old buildings was considered. However, upon further inspection of those old facilities, it was deemed more cost effective to construct new facilities for sustainability. The new building designs will consider energy efficiency measures such as the use of solar PV and a low carbon procurement policy will be adopted when furnishing these facilities with equipment.
12. **Component 3: Project Management and Monitoring and Evaluation: *increase in scope and cost from US\$ 1.50 million to US\$ 1.98 million.***
 - ***Sub-component 3.1: Project management (total new allocation US\$ 1,300,000, including US\$ 198,000 from AF).*** Activities will support any additional technical staff required for management and monitoring with regard to vaccine procurement, cold chain strengthening and vaccination delivery support. It will also ensure development and implementation of community complaint and feedback mechanism on preventive information and vaccine provisions, as well as environmental safety measures.
 - ***Sub-component 3.2: Monitoring and evaluation (total new allocation US\$684,300, including US\$ 265,000 from AF).*** Beneficiaries' satisfaction survey, performance monitoring of vaccination program implementation, efficient utilization of project investments, and capturing of lessons learned will be carried out as needed.

13. **New Component 4: Strengthening Preparedness for Health Emergency** (*total new allocation US\$2.0 million, all from HEPRTF*). HEPRTF supported activities aim to increase resilience of the health system to prepare for public health emergencies in priority geographical locations in Lao PDR:
- ***Sub-component 4.1: Enhance the health system and facilities for future emergencies*** (*total new allocation US\$1.7 million*). Activities include an assessment of health facilities' preparedness including WASH services and medical waste management; review of roles, responsibilities, and standard operating procedures in emergency management operations; and technical assistance for safe and resilient health facilities with enhanced emergency preparedness to withstand anticipated climate-related shock such as floods. These include the development of recommendations on strengthening health preparedness and emergency response including on WASH interventions for building resilience, mapping of interrelated health emergency response roles and responsibilities, development of a training program to address gaps in technical capacity for emergency management operations. It also supports works at the hospital sites where isolation facilities will be built with appropriate internal plumbing and air ventilation systems designed to prevent the spread of airborne pathogens such as COVID-19. Effective solid waste and wastewater collection, treatment and disposal facilities will be provided. Floor levels of the new facilities will be elevated in locations where there is flood risk, to reduce vulnerability against floods.
 - ***Sub-component 4.2: Prepare for health emergencies*** (*total new allocation US\$ 240,000*). Activities include the identification of critical lifeline infrastructure on which healthcare systems depend that are vulnerable to disasters including climate-related such as extreme precipitation and flooding and heat wave events; assessment of healthcare supply chain vulnerabilities, distribution time and transportation; and development of multi-hazard business continuity plans for health facilities, lifeline infrastructure and basic services. These health emergencies will include the ongoing COVID pandemic as well as providing a future legacy of preparedness to detect and respond to future major health threats including those caused or exacerbated by climate-change.
 - ***Sub-component 4.3: Estimate resource needs for health emergencies*** (*total new allocation US\$ 60,000*). The grant will estimate water and sanitation resources needed for a health emergency.

2.2 Project Implementation, Activities, and Budget Allocation

14. The same as the parent project, MOH is the implementing agency for the AF. MOH technical departments concerned will be involved in Project implementation based on their functional capacities and institutional mandates and assignments from the Emergency Operations Center (EOC)⁷. The Project Coordination Office (PCO) of the

⁷ The EOC is chaired by Minister of Health and composed of representatives from concerned departments, has been activated since January 2020 with a mandate to providing strategic advice and overseeing the implementation of measures in combating COVID-19, and directly reports to the government taskforce committee and responsible for facilitating overall coordination among the government agencies and development partners (DPs). The EOC is providing regular updates through meetings, with participation from all development partners and government agencies and press in regard to the progress of COVID-19 response. The Project will continue to strengthen and support existing mechanism. WHO is taking lead in providing technical assistance to the EOC in preparing a common COVID-19 response framework, which will be a basis for collaboration among DPs in providing support.

Department of Planning and Coordination (DPC) will provide support to the departments in implementing Project activities in line with the national preparedness and response plan for COVID-19. Key technical agencies (PIEs) will include, but not limited to, the Department of Communication Disease and Control (DCDC), the Department of Hygiene and Health Promotions (DHHP), the Department of Healthcare and Rehabilitation (DHR), the Food and Drugs Department (FDD), the National Center for Laboratory and Epidemiology (NCLE), the National Center for Communication and Education for Health (CCEH), and the provincial and district health offices (PHO and DHO). For COVID-19 vaccines procurement and deployment, the FDD and the Mother and Child Health Center (MCHC) of the DHHP in close cooperation of POH and DOH will play a leading role while key agencies under Ministry of Public Works and Transport (MPWT) will also be involved. The National Committee for Communicable Disease Control (NCCDC) and the committees responsible for the implementation of the National Deployment of Vaccination Plan (NDVP) for COVID-19 Vaccine⁸ established by GOL in February 2021 will provide policy guidance. Details on the vaccination program (NDVP) are discussed in Section 3.

15. Table 2.1 identifies the additional activities while Table 2.2 provides information on budget allocation of the parent project and additional financing and Table 2.3 provides typical activities to be financed under the AF.

Table 2.1: Original Activities and Activities under AF

Original components and activities	Changes or Additionalities under AF
Component 1: Emergency COVID-19 Response	
Sub-component 1.1 will support hotline operations, strengthening coordination along with information management and dissemination.	No additional activities. This sub-component budget will be decreased from \$475,000 to \$386,356 due to revised scope of activities on (1) IT equipment and furniture (2) Central information management and dissemination through website. The budget will be reallocated to 1.7 Risk Communication
Sub-component 1.2 will enhance capacity of health staff for infection prevention and control.	No additional activities
Sub-component 1.3 will continue support case detection, confirmation, contact tracing, and strengthening surveillance system.	No additional activities
Sub-component 1.4 will continue support the COVID-19 preventive and disinfection activities related to environmental cleaning and safe.	This sub-component finances COVID-19 preventive and disinfection activities related to waste treatment and infected wastes management at community level. Activities will be expanded to include the COVID-19 vaccine waste management at point of services, improved sharp waste management facilities where needed.

⁸ Dated 8 February 2021 (version 4). It is expected that the NDVP will be updated when vaccines are available in Lao PDR. This NDVP for COVID-19 vaccines is based on the “*Interim Guidance on developing a national deployment and vaccination plan for COVID-19 vaccines*” developed in cooperation with WHO. The NDVP defines the processes and structures required for delivering COVID-19 vaccines and related supplies and rapidly vaccinating the targeted population.

Original components and activities	Changes or Additionalities under AF
Sub-component 1.5 will provide treatment to COVID-19 patients and necessary medical equipment and supplies for COVID-19 testing.	No additional activities
Sub-component 1.6 will support the management of quarantine facilities.	No additional activities This sub-component budget will be decreased from \$360,000 to \$268,025 and reallocated to 1.7 Risk Communication
Sub-component 1.7 will support comprehensive communication and public awareness about the COVID-19 vaccine and behavior change intervention to support key prevention behaviors.	This component will be expanded with evidence-based, strategic communication activities to raise public awareness on the rationale for vaccinating selected target populations, vaccine safety and vaccine deployment process; to address misinformation and vaccine hesitancy to build confidence and trust in vaccines, reduce stigma, fears and misconceptions around COVID-19 vaccine such as causing fertility problems; and create demand for and positive attitude and behavior towards the vaccines among the public. A massive communication campaign tailored to the context of Lao PDR will be implemented through multiple communication channels based on the findings and recommendations from the recent Media Audit in Lao PDR done by the World Bank. This includes community traditional announcement, broadcasting on radio and TV programs, and social media, such as Facebook and WhatsApp groups to ensure that no segment of the population is left out of communication campaign targeting, including persons with a disability, ethnic minorities, age groups, etc This sub-component budget will be increased from \$200,000 to \$441,880, reallocated from sub-components 1.1 and 1.6.
Sub-component 1.8 will continue ensure the availability and access to essential health service delivery in the time of COVID-19	This sub-component will support (a) Stock management for equipment for health system strengthening (b) Develop SOPs on safe delivery of essential health services and (c) Boost coverage of all mother and child health services (MCH). The budget will be increased from \$1, 810,000 to \$1,923,500. The budget will be reallocated from 1.9 Allowance for health workers, support staff, and volunteers (Contingencies)
Sub-component 1.9: will cover the overtime payment to all personnel support the COVID-19 response both government officials, health staff, and volunteer.	No additional activities This sub-component budget will be reduced from \$1,000,000 to \$714,953. The budget will be reallocated to 1.8 Essential Health Service Delivery. This sub-component is renamed as Allowance for health workers, support staff, and volunteers
Sub-component 1.10 will procurement vaccines and supplies for medical emergencies	This sub-component will support the procurement of COVID-19 vaccines that received WHO Emergency Use Listing and has been produced with a licensing or similar arrangement from a manufacturer of a parent vaccine that has a prior Stringent Regulatory Authority approval (including Emergency Use Authorization).

Original components and activities	Changes or Additionalities under AF
Sub-component 1.11 will support COVID-19 vaccine deployment.	<p>The sub-component will finance a set of activities for vaccine deployment, including (a) training of health staff on vaccine delivery and security; (b) vaccine roll-out, (c) post deployment and management of adverse event following immunization (AEFI) AEFI surveillance; and (d) management, supervision and monitoring of the vaccine deployment.</p> <p>This sub-component will support health human resources and provision of supplies required for vaccine roll-out through fixed site and outreach/mobile delivery according to the deployment plan to ensure to reach target groups in remote and rural communities, and enhancement of monitoring of vaccine receivers to counter any resistance to the vaccine. TA can be provided to support optimization for vaccine delivery to adopt ICT, minimize vaccine wastage and reduce travel distance.</p>
Component 2: Strengthening System for Emergency Response	
Sub-component 2.1 will provide capacity building and training of health personnel on treatment guidelines, and hospital infection control interventions.	No additional activities. The scope of this sub-component is reduced from \$1,120,000 to \$239,140. The budget will be reallocated to sub-component 2.5 treatment center and sub-component 3.2 Monitoring and Evaluation.
Sub-component 2.2 will improve laboratory capacity	<p>No additional activities</p> <p>This sub-component budget will be reduced from \$250,000 to \$13,303. Budget reduced allocates 2.4 Logistic management, warehouse management, distribution. Partners such as WHO and PSI engaged in providing support on Laboratory training for the laboratory workers.</p>
Sub-component 2.3 will strengthen information system for surveillance.	<p>The scope of activity under the sub-component remains unchanged. The original activities supporting the COVID-19 surveillance system will continue. Activities will include development of be expanded to enhance a system for vaccine registry and for monitoring of AEFI while and evaluation system to record the details of the recipients of vaccine as well as vaccine adverse effects while benefitting from the fairly robust personal identification system available in the country; at the same time data protection and safety of personal data will be ensured. This may include engaging partner organizations, especially UNICEF, WHO and USCDC, in various roles.</p> <p>The cost of modification and training of the COVID-19 module will be supported by WHO, UNICEF, and PSI. Therefore, the cost for the sub-component is reduced to cover the cost of IT equipment and routine immunization recording, daily records documenting the bar code of the vaccine provided to each individual and records of any adverse vaccination effects. This sub-component budget will be reduced from \$250,000 to \$200,000 and will be reallocated to 2.4 Logistic management, warehouse management, distribution</p>
Sub-component 2.4: Logistic management, warehouse management, distribution	Activities will be expanded to include transportation of the vaccine and maintenance of the cold change system and minor repair of vaccine required storage room.

Original components and activities	Changes or Additionalities under AF
	This sub-component budget will be increased from \$200,000 to \$562,300 and reallocated from 2.1 Capacity building and training of health personnel on treatment guidelines, and hospital infection control interventions
Sub-component 2.5 will upgrade health facilities for diagnostics and treatment of COVID-19	Reallocation of the original financing within the sub-component to ensure adequate fund for the construction of the new healthcare facilities in the three Southern provinces. This sub-component budget will be increased from \$1,850,000 to \$2,388,175, reallocated from 2.1 Capacity building and training of health personnel on treatment guidelines, and hospital infection control interventions
Component 3: Project Management and, Monitoring and Evaluation	
Sub-component 3.1 will ensure adequate number of experts and operating cost to support the implementation of the project.	Activities will support any additional technical staff required for management and monitoring with regard to vaccine procurement, cold chain strengthening and vaccination delivery support. It will also ensure development of community complaint and feedback mechanism on preventive information and vaccine provisions, as well as environmental safety measures.
Sub-component 3.2 will monitor and evaluate the performance and results of the project and the COVID-19 access and coverage.	Beneficiaries' satisfaction survey, performance monitoring of vaccination program implementation and efficient utilization of project investments and lesson learn will be carried out as needed. This sub-component budget will be increased from \$200,000 to \$684,300, reallocated from 2.1 Capacity building and training of health personnel on treatment guidelines, and hospital infection control interventions
Component 4: Strengthening Preparedness for Health Emergency -new component	
Sub-component 4.1 will enhance the health system and facilities for future emergencies	The sub-component will support (i) assessment of health facilities preparedness (including the WASH services and medical waste management in health care facilities) for health emergencies; (ii) implement works based on recommendation from (i) at the three hospital sites where isolation facilities will be built (IDA financing) with appropriate internal plumbing e.g. install sealed bathroom drains, and backflow valves on sprayers and faucets to prevent aerosolized fecal matter from entering the plumbing or ventilation system. Works should also include well-designed air ventilation systems and raising the floor level of the new isolation facility at Attapeu hospital that is exposed to flooding. The grant will finance effective solid waste and wastewater collection, treatment and disposal facilities, and support scaling up of solid waste and wastewater management best practices. Activities also include (iii) review of roles, responsibilities, and standard operating procedures in emergency management operations; and (iv) technical assistance to ensure safe and resilient health facilities with enhanced emergency preparedness.
Sub-component 4.2 will prepare for health emergency by developing and implementing preparedness assessments plans, conducting simulation exercises	Activities will be (i) identification of critical lifeline infrastructure on which health care systems depend that are vulnerable to disasters; (ii) assessment of healthcare supply chain vulnerabilities, distribution time and transportation, and (iii) development of multi-hazard business continuity plans for health facilities, lifeline

Original components and activities	Changes or Additionalities under AF
	infrastructure and basic services; (iv) enhancement of emergency preparedness of the three new health facilities.
Sub-component 4.3 will estimate resource needs in case of a health emergency.	This sub-component will estimate water and sanitation resources needed in case of a health emergency in vulnerable areas, and develop a distribution plan for emergency provision of water supply and sanitation.

Table 2.2: Project Cost and Financing (US\$)

Project Components	Parent Project Cost (US\$)	Revised Parent + AF Cost (US\$)	IDA Financing (US\$)	Trust Fund (US\$)	Key Responsible Entity
Component 1: Emergency COVID-19 Response	12,830,000	25,612,782	9,507,000	3,000,000	
1.1 Coordination - EOC coordination at central and provincial levels	475,000	386,356	-	-	DCDC
1.2 Infection prevention and control	1,022,880	1,022,880	-	-	DHR
1.3 Case detection, confirmation, contact tracing	1,838,000	1,838,000	-	-	NCLE
1.4 Environmental cleaning and disinfection activities	1,800,000	1,874,000	-	-	DHHP
1.5 Case management and isolation	4,324,120	4,324,120	-	-	DHR
1.6 Quarantine	360,000	268,025	-	-	DCDC
1.7 Risk communication	200,000	441,880	245,000	-	DHHP, MCHC, CCEH
1.8 Essential health service delivery	1,810,000	1,923,500	-	-	DHR, NCLE, FDD, MPSC, DCDC, DHHP, EPI, MNC,
1.9 Allowance for health workers, support staff, and volunteers (Contingencies)	1,000,000	714,953	-	-	DOF, DHR
1.10 Vaccine procurement	-	5,138,636	5,138,636	-	DHHP, MCHC, FDD
1.11 Vaccine deployment	-	7,680,432	4,123,364	3,000,000	DHHP, MCHC, FDD, DHR
COMPONENT 2: Strengthening System for Emergency Response	3,670,000	3,402,918	30,000	-	
2.1 Capacity building and training of health personnel on treatment guidelines, and	1,120,000	239,140	-	-	DHHP, MCHC, FDD, DHR, DCDC

hospital infection control interventions					
2.2 Laboratory capacity	250,000	13,303	-	-	NCLE
2.3 Strengthening information system for surveillance	250,000	200,000	-	-	DPC/PCO, MCHC
2.4 Logistic management, warehouse management, distribution	200,000	562,300	30,000	-	MCHC, MPSC, FDD, NCFDA, FDQCC
2.5 Treatment centers	1,850,000	2,388,175	-	-	DHR
COMPONENT 3: Project Management and Monitoring and Evaluation	1,500,000	1,984,300	463,000	-	
3.1 Project management	1,300,000	1,300,000	198,000	-	DPC/PCO, DHR, DCDC, DHHP, MPSC,
3.2 Monitoring and evaluation	200,000	684,300	265,000	-	DPC/PCO, MCHC, DHHP
COMPONENT 4: Strengthening Preparedness for Health Emergency	-	2,000,000	-	2,000,000	
4.1 Enhancing health systems and facilities for future emergencies	-	1,700,000	-	1,700,000	MOH
4.2 Preparing for health emergencies by developing and implementing preparedness assessments and plans, conducting simulation exercises	-	240,000	-	240,000	MOH and MPWT
4.3 Estimating resource needs in case of a health emergency	-	60,000	-	60,000	MOH
Total project budget	18,000,000	33,000,000	10,000,000	5,000,000	MOH

Table 2.3: Positive list of goods, services and works

Item
Goods
<ul style="list-style-type: none"> • Medical equipment and supplies, including but not limited to rehydration fluids, antibiotics, antivirals, ventilators, respiratory care equipment, IV pumps, referral equipment, isolation area equipment; air filter for waste incineration. • Cleaning supplies including hand hygiene and disinfectants. • Personal Protective Equipment (PPE) stockpiles, including masks, gowns and gloves • Morgue Packs • Non-perishable foods, bottled water and containers • Tents for advanced medical posts, temporary housing, and classroom/daycare substitution

<ul style="list-style-type: none"> • Equipment and supplies for temporary housing/living (gas stoves, utensils, tents, beds, sleeping bags, mattresses, blankets, hammocks, mosquito nets, kit of personal and family hygiene, etc.) and school • Gasoline and diesel (for air, land and sea transport) and engine lubricants • Spare parts, equipment and supplies for engines, transport, construction vehicles • Lease of vehicles (Vans, trucks and SUVs) • Equipment, tools, materials and supplies for search and rescue (including light motorboats and engines for transport and rescue) • Tools and construction supplies (roofing, cement, iron, stone, blocks, etc.) • Information, Education and Communications (IEC) materials, equipment and supplies for communications and broadcasting (radios, video clips, posters, banners, antennas, batteries) • Water pumps and tanks for water storage • Equipment, materials and supplies for disinfection of drinking water and repair/rehabilitate of black water collection systems • Temporary toilets • Groundwater boreholes, cargos, equipment to allow access to affected site, storage units • Any other item agreed on between the World Bank and the Recipient (as documented in an Aide-Memoire or other appropriate formal Project document). • Procurement of COVID-19 vaccines acceptable to World Bank.
<p>Civil works</p> <ul style="list-style-type: none"> • Under Components 1 and 2, the Project will finance construction of new physical civil works (one-story buildings) and retrofitting of isolation rooms and treatment centers in the existing healthcare facilities (HCF) and/or water supply, sanitation, and hygiene facility (WASH) including those related to hospital waste management.
<p>Services</p> <ul style="list-style-type: none"> • Consulting services related to emergency response including, but not limited to, urgent studies and surveys necessary to assess the needs and capacity gaps in the HCF and to develop and update the readiness and response plan, and support to the implementation of emergency response activities. • Specific specialized consulting service providers or agencies who may be required for investigating and assessing sensitive incidents or issues, e.g mental counselling and SEA/SH, GBV and VAC survivor-centered services. • Feasibility study and technical design related to COVID-19 emergency responses. • Technical Assistance in developing TORs, preparing Technical Specifications and drafting tendering documents (Bidding Documents, ITQ, RFP) related to COVID-19 emergency responses. • Non-consultant services including, but not limited to, infectious and sharp waste management services, drilling, aerial photographs, satellite images, maps and other similar operations, information and awareness campaigns. • Deployment of COVID-19 vaccines acceptable to the World Bank. Forced vaccination will not be allowed.
<p>Training</p> <ul style="list-style-type: none"> • Under Components 1 and 2, training related to ICWMP and IPC will be conducted. Under Component 3, priority training will be conducted to ensure effective implementation of the ESMF and other related ESS measures, especially those related to emergency responses, infectious and other hazardous hospital wastes, and infection and prevention control measures related to COVID-19. • Training on rapid needs assessment and other related assessments. • Training on safe procurement and deployment of vaccines and follow-up activities.
<p>Emergency Operating Costs</p>

- “Operating costs” means reasonable costs required for the day-to-day coordination, administration, operation and supervision of Project activities, including routine repair and maintenance of office equipment, facilities and office premises, fuel, office supplies, consumables, communication expenses (including postage, telephone and internet costs), translation, minor printing and photocopying expenses, bank charges, advertising expenses, Project-related meeting expenses, Project-related travel, subsistence and lodging expenses, insurance for project staffs, overtime payment to government health workers, salary for additional health workers; per diem and accommodation for volunteers, food and basic supplies for quarantined populations and other administrative costs directly related to the Project.

16. The Project will not finance any activity that is considered by the World Bank as “High” ESS risk especially those expected to cause significant loss or degradation of critical natural habitats; adversely affect forest and forest health or sites with physical cultural resources; and/or create adverse impacts on involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households’ use of land and livelihoods. A list of non-eligible activities has been established (see Annex II).

2.3 Project Area and Beneficiaries.

17. The Project will be supported and implemented throughout the country, including people living near borders and in the areas with high population density e.g. Vientiane Capital (VTE), Savannakhet (SVK), Luang Prabang (LPB), and Champasack (CPS) provinces as well as those groups who may be at particular risk with COVID 19 (i.e. returning from affected countries) and vulnerable groups such as elderly people; children, particularly those that are malnourished; those with underlying health conditions (e.g. diabetes, cancer, hypertension, coronary heart diseases, and respiratory diseases, among others); persons with disabilities including physical and mental health disabilities; single parent headed households, male and female; poor, economically marginalized, and disadvantaged groups; and ethnic minorities.
18. Based on the NDVP, the first priority groups to receive the vaccine will be (i) health care workers, which include professionals from the Ministry of Health, Ministry of Defense and Police Hospitals, including laboratory staff, pharmacists, village health volunteers and health workers in the private health facilities, as well as vaccination teams; (ii) those over 60 years; (iii) people with underlying health conditions such as chronic kidney disease, diabetes, chronic health disease, chronic respiratory disease (excluding mild asthma), chronic liver disease, obesity (BMI 30 kg/m² or higher), cancer, immunocompromised, including solid organ transplantation, hypertension and Down syndrome; (iv) essential workers, such as health care and social workers, teachers, administrators, security forces, border control officers, local and national civil servants, judges, farmers, workers in essential services such as transports, logistics, energy, mining and industry, utility services (gas, petrol, electricity, water, etc.), finance, communications, customs; and (v) essential travelers, who could be at risk of contracting the and introducing the vaccine, including those considered essential for maintaining the economy and services operating such as migrant workers, international students, business people, diplomats, international organizations and aid workers.

19. Once the vaccine is more readily available, further groups will be eligible for vaccination. The NDVP suggested that vaccination will be conducted in Vientiane (VTE) and all provinces. Table 2.4 summarizes information on priority groups for COVID-19 vaccination in Lao PDR as identified in the NDVP.

Table 2.4. Priority groups for COVID-19 vaccination in Lao PDR, 2021.

Ranking of vulnerable group	Population group	Number of people	Percent of population
Phase I (22 percent)	<u>Stage I</u> <ul style="list-style-type: none"> • Health care workers <u>Stage II</u> <ul style="list-style-type: none"> • Older adults above age 60 • Individuals with underlying health conditions <u>Stage III</u> <ul style="list-style-type: none"> • Essential workers • Essential travelers 	1,615,000	22 percent
Phase II (50 percent)	<ul style="list-style-type: none"> • Low income, homeless people • Hard to reach populations • People with disabilities 	2,055,455	28 percent
Phase III (70 percent)	<ul style="list-style-type: none"> • Healthy adults • Eligible citizens not covered in the earlier phase 	1,468,182	20 percent
Total		5,138,637	70 percent

20. Vaccination activities in Lao PDR began in February 2021, with vaccines donated from China (Sinopharm) and Russia (Sputnik). As of March 10, 14 out of 18 provinces had begun vaccination and 10,606 doses had been administered.
21. On beneficiaries, in total, it is expected that the Project beneficiaries will be the entire population of Lao PDR while the immediate beneficiaries will be people with COVID-19, priority groups for vaccination, at-risk populations, frontline medical and emergency personnel, and all people working in or dependent on testing facilities and health agencies including staff of the key technical departments within MOH, medical facilities and provinces.

2.4 Site-Specific Investments

22. During the implementation of Component 1 of the parent project, DHHP activity/subproject activities will involve training and capacity building to MOH and PHO/DHO staff on compliance with MOH regulations related to water supply, sanitation, and hygiene (WASH) including undertaking assessment of existing WASH facilities of priority HCFs and providing equipment and facilities necessary to ensure effective management of solid waste in 6 hospitals that treated Covid-19 patients, 3 central hospitals in Vientiane Capital and 20 community hospitals located near the point of entry (POE)⁹. The DHHP activity/subproject (Activity 1.4.2) may also include improvement on (a) wastewater treatment (WWT) systems in 2 provincial hospitals (LPB and CPS); (b) WASH systems in 3 central hospitals (Settha, Mittaphap, and 103) and 3 provincial hospitals (LPB, CPS, and Sekong); and (c) provision of drinking water and water supply for 3 central hospitals (Settha, Mittaphap, and 103) and 3 provincial hospitals (LPB, SK,

⁹ Activity 1.4.3.1 of the DHHP ESS work plan of the parent project

and CPS). DHHP and concerned agencies team will conduct an initial assessment on adequacy of the existing WASH facilities using the interim guideline on water, sanitation, hygiene, and waste management facility improvement tool (called WASH-FIT) dated 29 July 2020 developed by WHO. The parent project has allocated budget for these activities. With the AF, a technical assistance (TA) to be provided under the trust fund (HEPR-TF) will provide additional supports to ensure that these existing facilities are properly assessed and confirm the need for priority investments including ensuring proper design and incorporation of ESMF requirements in the design, bidding and contract documents (BD/CD) and preparation of an ESMP as agreed with WB. DHHP and/or the HCF owners will be responsible for ensuring effective supervision of construction/rehabilitation works as well as for effective and timely implementation of the ESMP. Priority for the TA will be given to ensure that appropriate machines, equipment, and medical supplies will be available for staff and workers to safely carry out the services and provide more training.

23. For vaccines deployment, with the AF, it is expected that DHHP through its associate MCHC will play a leading role during the deployment of the vaccines – including the planning process, purchase of the vaccine, delivery, communications program and development of IEC materials, training of staff, waste management and surveillance of adverse effects following immunization (AEFI). More training and capacity building on these aspects will be conducted for responsible staff at the central, provincial, and local levels. This will include guidelines on COVID vaccination, safe practices, disposal, and communications and outreach, among others. PCO/DPC will also strengthen its capacity to provide guidance, training, and capacity building to ensure that the DHHP and other PIEs have adequate budget and capacity to effectively and timely manage and implement the vaccines deployment program including training and monitoring of the activities conducted by local agencies (PHO and DHO). The TA will also ensure that sharps and other medical wastes from vaccination program will be effectively and safely managed (collect, transport, storage, and on-site treatment and disposal) including have adequate machines, equipment, and medical supplies for the staff and workers to provide the services.
24. Under Component 2, the parent project will also support DHR to provide equipment, training, and capacity building on COVID-19 treatment centers including investment on civil works for setting up of isolation rooms and treatment centers in 3 provinces CPS, Attapeu, and Sekong¹⁰ and renovation of the treatment centers and laboratory for LPB hospital (Activity 2.5.2). Hiring of a national consulting firm to prepare detailed design (DD), bidding and contract documents (BD/CD) and site-specific ESMP for the five new facilities as required by the ESMF is on-going. DHR or the HCF owners (at central and local levels) will be responsible for ensuring effective supervision of construction/rehabilitation works as well as implementation of the ESMP to ensure effective operations of the HCFs including solid and liquid waste management. Box 2.1 provides general description (at conceptual stage) of the new health facilities (one-story building) to be constructed in Champasak (two buildings), Attapeu (two buildings), and Sekong (two buildings) provinces.

<p>Box 2.1 General description of the new HCF in Champasak, Attapeu, and Sekong (at conceptual stage)</p> <p>The proposed new facilities are 6 one-story buildings to be used as Intensive Care Unit (ICU), isolation wards, and Laboratories as detailed below:</p>
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¹⁰ Activity 2.5.2 of the ESS workplan of the parent project.

- a. Champasak (Phonthong district hospital): Two new buildings: (1) ICU with capacity of 4-6 beds (size about 585 square meters (sqm) or 15.5 meters (m) x 39.9m), connected with isolation ward consisting of 16 isolated bedrooms (735 sqm or 17.5m x 42.75m). (2) Laboratory 165 sqm.
- b. Attapeu (provincial hospital): Two new buildings: (1) Isolation building (16 beds and about 1,120 sqm or 37m x 30.2 m) and ICU of 4 bed capacity; and (2) Laboratory 165 sqm.
- c. Sekong: Two new buildings. (1) Isolation ward (16 beds and about 1,314 sqm or 45.5 m x 15m), connected to ICU (4 beds and about 1,120 sqm or 39m x 20.2m); (2) Laboratory 165 sqm.

- 25. It is also expected that the technical assistance (TA) from HEPR-TF will also ensure that the new HCF facilities in Champasak, Attapeu, and Sekong and other facilities to be financed under the Project are properly designed, constructed, and operated taking into account the needs to comply with the ESF requirements as well as to address issues related to floods. The HEPR-TF will also address issues related to climate resilience of HCFs, especially those related to flood risk.

Section 3. Policy, Legal and Regulatory Framework

3.1 National Policy and Regulatory Setting

- 26. *National Environmental and Social Legislation and Institutional Setting.* In Lao PDR, based on the Environmental Protection Law (EPL, 1999, 2012), an Environmental Impact Assessment Decree issued outlines a process and step for development of an Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE) for all investment projects. The decree was first promulgated in 2010 and updated twice in 2013 and 2019. A number of follow-up regulations and technical guidelines have been prepared and/or updated to enhance effective implementation of the EIA and IEE processes.
- 27. On pollution control and waste management, under the 2012 EPL, in 2015, the Ministry of Natural Resources and Environment (MONRE) issued a regulation on hazardous waste management in 2015 and on others related to national environmental quality standards and emission control standards in 2017 while developing new regulations and/or guidelines related to pollution control, waste management, and toxic chemicals and hazardous substances. MONRE and provincial and local agencies responsible for natural resources and environment (PONRE/DONRE, Vientiane Capital, and Cities/Municipalities) are the lead ministry/agencies responsible for management of water resources, EIA/IEE processes, and pollution control and waste management. However other sector ministries¹¹ and their provincial and districts offices (including Vientiane capitals and other cities) have also issued regulations and/or guidelines (under other laws) related to pollution control, waste management, health, and safety. Nonetheless, implementation of these laws, regulations, and/or guidelines are ineffective due to limited budget and human resources.
- 28. Lao PDR is also a member of the 1989 Basel Convention on Transboundary Movements of Hazardous Wastes and their Disposal (effective in May 1992) as well as the 2001 Stockholm Convention on Persistent Organic Pollutants (POPs) (effective in May 2004),

¹¹ Such as Ministry of Public Health (MOH), Ministry of Industries and Commerce (MOIC), Ministry of Public Works and Transport (MPWT), Ministry of Labor and Social Welfare (MLSW), Ministry of Energy and Mines (MEM), and Ministry of Planning and Investment (MPI).

and the 2013 Minamata Convention on Mercury (effective in 2017) aiming to control the use and disposal of mercury and mercury compound.

29. A Guideline on Consultation with Ethnic Groups launched by Lao Front for National Development in 2012 provides guidance and process of conducting consultation with all ethnic groups affected by both public and development projects largely in line with the ESS10: Stakeholder Engagement and Information Disclosure.
30. ***Laws, Regulation and Institutional setting in the Public Health Sector.*** For health sector, as part of the Public Sector Health Care Strategy aiming to increase capacity on modern health care services, GOL updated the 2005 Law on Health Care (LOHC) in 2014 (No. 58/NA, dated 24 December 2014). The 2014 LOHC describes the principles, regulations and different measures relating to the organization, activities, management and control of health care activities, in order to ensuring that all citizens, societies and communities have access to equal, full, equitable and quality health care services while protecting the rights and interests of health care professional. The Law on Immunization (2018) stipulated that vaccination will be made on a voluntary basis. According to the law, the healthcare administrative agencies consist of (1) the MOH at the National level; (2) the PHO at the provincial level, and (3) DHO at the district level. There is also a health center (small hospital) established at the cluster (Khum Ban) level and dispensary in some villages. A special Taskforce was also set up at national, provincial, district and village levels for the emergency case such as COVID-19 pandemic. The National Assembly is approving for implementation of the related laws while the MOH is leading and coordinating the line ministries at all levels including other sectors and relevant local administrative authorities to implement all health-and COVID-19 related activities.
31. Some regulations issued by MOH for implementation of health care specific issues include (a) Sharp Waste Management Guidelines, issued by the Director General of the Department of Planning and Coordination (DPC/MOH), dated 10 October 2019, (b) Law on Preventive Vaccination (immunization) approved by the National Assembly on 09 August 2018, (c) Law on Prevention and Control of Communicable Disease, approved by the National Assembly on 19 December 2017, (d) Law on Health Care, approved by the National Assembly on 22 January 2015, (e) Decision on Healthcare Waste Management (No. 1373, dated 23 November, 2017), and (f) Decision on hygiene condition of healthcare facilities (No. 1667, dated 15 August 2018), printed by DHHP in 2018. MONRE has also established a Decree on hazardous waste management (2015) and is updating this decision.
32. On vaccination programs, the following national legislations, laws and policies have been developed by FDD for regulation of medicines, vaccines and other health products, including for accepting donations and ancillary products. The key ones are: Law on drugs and medical products, 2011; Regulation on Business Establishment for Medicine and Medical Product Company, 2017; Pharmaceutical Import-Export Company Regulation, 2017; Regulation on Drug and Medical Products Donation, 2003; Regulation on destroying of drug and medical products, 2016; Order of Ministry of Health on monitoring and law enforcement for unregistered medicine, 2011; Drug registration, 2003; Regulation on pharmaceutical manufacturer, 2004; Regulation on GMP, 1999; and Current Banned Drug List, 2015. On 2nd January 2009, the FDD published a legal notice (No. 1189/FDD) to “ensure the quality, efficacy and safety of imported drugs and medicinal products for use in health related projects” in Lao PDR. This notice informs to

departments and agencies that intent to import drugs or medicinal products about the documentations, procedures and requirements prior, during and post-importation. For new products (products which have been registered in the originating country less than 5 years, particularly biological products such as vaccine) an additional document is required: a detailed report of the clinical trial for the product, or similar document certified by a WHO Scientific Advisory Body.

33. ***Laws, regulations, and institutions setting in labor sector.*** National Assembly approved on December 2013 a Labor Law which superseded a labor law adopted on December 27, 2006. The new labor law defines the principles, regulations and measures on administration, monitoring, labor skills development, recruitment, and labor protection in order to enhance the quality and productivity of work in society, so as to ensure the transformation to modernization and industrialization aimed at safeguarding the rights of employees and employers, as well as the legitimate interests and the continual improvement of their livelihoods, while contributing to the promotion of investment, national socio-economic development, and regional and international links. This labor law applies to all employers, registered and unregistered employees, Lao employees working for foreign organizations, and foreign employees working within the Lao PDR.
34. Section VIII of the 2013 labor law provides a mandatory obligation for all parties on Labor Occupational Health and Safety (OHS) to protect labor health and safety, and labor accident and occupational diseases. It sets out an obligation of all levels to take care of labor occupational health and safety include the obligation of employer, obligation of employee, obligation of the designing and supplying entity, and obligation of responsibility parties. The Ministry of Labor and Social Welfare (MLSW) at the national level, the Department of Labor and Social Welfare at the provincial level, the Division of Labor and Social Welfare at the district level and the unit of Labor and Social Welfare at the village level have the responsibility to implement the provision of this labor law.
35. In November 2016, MLSW issues a regulation identifying type of work with hazardous condition not to be hired for workers younger than 18-years old.
36. In addition, existing national legislations including Law on Civil Servants (2016) and Decree on Code of Conduct for Civil Servants (2019), Law on Preventing and Combating Violence Against Women and Children (2006) and Panel Law (2017) contain provisions which are largely consistent with ESS2 and ESS4. These legislations provide regulations and measures to manage, prevent and address potential misconduct among civil servants including health workers and outsourced volunteers, community health and safety issues and risks associated with Sexual Exploitation and Abuse (SEA), Gender-based Violence (GBV) and Violence Against Children (VAC) that may occur under project. The Lao government has ratified five out of eight of the fundamental ILO conventions, including on forced labor, child labor, minimum age, discrimination and equal remuneration¹².
37. ***GOL Policy and Procedure to combat COVID-19.*** In March 2020, considering the outbreak of COVID-19 pandemic in neighboring countries such as China, Thailand, Vietnam, and others, the GOL took strict actions to prevent infection within Lao PDR. Three policy and guideline were issued on 13 March 2020 to control COVID-19

¹² The fundamental ILO conventions not ratified are: freedom of association, rights to organize, abolition of forced labour.

transmission and infection i.e. (a) guideline on prevention of the transmission and infection of COVID-19 at international airport, land border, and transportation stations; (b) guideline on prevention of the transmission and infection of COVID-19 at suspected to be infected area or temporary quarantine center; and (c) guideline on prevention of the transmission and infection of COVID-19 at public place (hotel, guesthouse, offices, schools, and others). On 29 March 2020, the Prime Minister issue an Order on Reinforcement Measures on Containment, prevention and full response to the COVID-19 pandemic (No. 06/PM, Vientiane Capital). This policy orders the restriction of people travelling and allows GOL officers to work from home during 1-19 April 2020. Concerned ministries and local authorities also issue follow up instructions to reinforce the PM's Order to suspend all types of hospitality and entertainment venues, alcohol and brewery shops and social gathering in observance of Lao New Year and other traditional festivities. With the outbreak situation evolving, a new PM Decree No 481 on April 15 was launched to extend the lockdown until May 3, 2020. It is expected that considering the COVID-19 contagion situation in Loa PDR as well as in other countries, the order will be adjusted as needed. In August-December 2020, there have been rapid increase in affected population both in Myanmar and Thailand.

38. ***On vaccination and deployment***, in October-December 2020, GOL in close cooperation with key development partners (UNICEF, WHO, etc.), conducted a vaccine readiness assessment framework (VRAF) covering 4 key areas: (a) Planning, Budgeting and Management (vaccination objective and targets, regulation & standards, performance management and M&E, and budgeting); (b) Supply and Distribution (vaccines, PPEs, and other supplies); (c) Program Delivery (community engagement and advocacy, points of delivery, vaccines safety surveillance, and clinical waste management); and (d) Support Systems and Infrastructure (date quality, infrastructure). The National Deployment and Vaccination Plan (NDVP) for COVID-19 vaccines was completed and is available in late February 2021. The NDVP was prepared to ensure a fair, equitable and inclusive policy for in-country vaccine access and allocation be developed and implemented.
39. Key elements of the NDVP can be highlighted as follows:
- The NDVP defines the processes and structures required for deployment of COVID-19 vaccines and related supplies and subsequent rapid vaccination of target population. The National Immunization Program (NIP) under the Mother and Child Health Centre (MCHC) at the DHHP of MOH has developed the NDVP in collaboration with WHO. The FDD of MOH is the National Regulatory Authority responsible for developing regulations and legal pathways for expedited authorization for use and importation. The overall planning and coordination of the deployment and vaccination operations will be managed by the Incident Manager and supported by the Focal Points for Vaccination and Logistics (see Box 3.1).
 - The NDVP also identified key regulatory and institutional setting to ensure effective implementation of the program as well as policy on target population, vaccination delivery strategies, supply chain management and healthcare waste management (HCWM), human resources management and training, vaccine acceptance and demand generation, vaccine safety monitoring and management of adverse event following immunization (AEFI), immunization monitoring system, COVID-19 surveillance, and evaluation of introduction of COVID-19 vaccines.

- Initial vaccination of about 5% of country’s population will be conducted among health care workers across the country, older adults (above 60yr), individuals with underlying health conditions, essential workers and essential travelers. Additional groups of people will be sequentially targeted for vaccination as soon as vaccine supply increases according to the guidance from National Immunization Technical Advisory Group (NITAG). Fixed vaccination sites at hospitals combined with mobile vaccination sites will be established. It is expected that a total of 488 fixed and mobile vaccine sites will establish covering 192 fixed sites in VTC (8), provinces (18), districts (148), and other (18) and 296 mobile sites nationwide.
- The Focal Point for Logistics will ensure effective and timely supply chain management which includes vaccine storage, handling, transport and distribution of vaccines and ancillary items in adequate conditions from the point of entry to the designated points for rapid vaccination. The capacities and requirement for storage and transport in cold chain have been assessed and planned for rapid and adequate deployment. Required and available capacities for waste management, strategies and methods for waste collection, transport, treatment and disposal of hazardous waste materials generated from immunization sessions have been mapped and planned to eliminate potential hazards to health staff and the public and safeguard the environment. Sufficient workforce adequately trained will ensure efficient deployment and vaccination.
- Public communication activities and risk communication strategies are being developed and will be implemented by the Centre for Communication and Education for Health (CCEH) at MOH in collaboration with UNICEF and WHO to ensure acceptance and generating demand. This requires an integrated approach, with a mix of social mobilization, interpersonal communication, and mass and local media and advocacy messages.
- Post-deployment surveillance activities will be conducted to monitor safety and effectiveness of new introduced COVID-19 vaccines. The surveillance system is already operational and has the capacity to investigate, analyze and manage any adverse event following immunization (AEFI). Once the deployment and vaccination operations are completed, monitoring and evaluation activities will be conducted to evaluate the program implementation and vaccine performance in the population. Lessons learned will be compiled and documented for future vaccination activities. A final report of the deployment and vaccination operations will be developed and distributed among national and international institutions.

Box 3.1 Planning and coordination on vaccination (NDVP, 2021)

Planning and coordination of the vaccine introduction rests with (a) the COVID-19 National Taskforce Committee responsible for overall management of the response; (b) the COVID-19 Vaccine Management Committee responsible for coordination with foreign countries on COVID-19 manufacturing and reports to the COVID-19 Taskforce; (c) The National Task Team for COVID-19 Vaccine Preparation and Implementation; and (d) the National Coordination and Management (NCM), responsible for the overall coordination of the deployment and vaccination field operations and it is managed by the Incident Manager (IM) and supported by the Focal Point for Vaccination (FPV) and the Focal Point for Logistics (FPL). Main roles and responsibilities are as follows:

- The COVID-19 National Taskforce Committee is chaired by the Vice Prime Minister and Vice MOH with the main function for overall management of the response;
- The COVID-19 Vaccine Management Committee is chaired by the Vice MOH and main functions include coordination with foreign countries on COVID-19 manufacturing and reports to the COVID-19 Taskforce, determine the estimation of the number of vaccines needed and determine the target for vaccines, as well as responsible for register vaccine and resource mobilization;
- The National Task Team for COVID-19 Vaccine Preparation and Implementation is chaired by the Director of Mother and Child Health Centre (MCHC) at MOH and Ministry of Information, Culture and Tourism. Main functions are to monitor the progress of the preparation for the COVID-19 vaccines introduction against the operational plan and continuously update the activities schedule as needed; To consider and identify factors for the successful, effective, and sustainable COVID-19 vaccine introduction using a target population-based strategy; To discuss and propose additional actions to be taken to facilitate the process towards introduction and ensure a high and equitable coverage of the COVID-19 vaccine is achieved. This Task Team will ensure efficient coordination across Departments, Ministries and development partners involved in the deployment and vaccination operations including MOH (DHHP Health Promotion Division, MCHC, DHCR (Hospital Administration Division), DCDC, NCLE, FDD (Hospital's Pharmacy Division); Department of Finance; Department of Planning and Cooperation; Ministry of ICT (Department of Mass-Media); Ministry of Finance (Department of Custom); Ministry of Defense (Department of Health Care); Ministry of Planning and Cooperation; and Development partners: WHO, UNICEF, WB, US-CDC, CHAI, NITAG.
- The National Coordination and Management is responsible for the overall coordination of the deployment and vaccination field operations is managed the Incident Manager (IM) and supported by the Focal Point for Vaccination (FPV) and the Focal Point for Logistics (FPL). The Incident Manager is responsible for managing a country's overall pandemic response; Works in coordination with the incident management team and national emergencies collaboration mechanism; Delegates responsibilities for deployment and vaccination to the FPL and FPV; and in collaboration with the FPL and FPV, drafts final report and outcomes on the deployment and vaccination activities; Has a supervisory role and establishes a command-and-control structure. The Focal Point for Logistics is responsible for deployment component of the NDVP; Oversees process for forecasting, vaccine reception, storage, transport distribution and waste management; Proposes execution schedule of vaccine shipments; Establishes processes for vaccine logistics data collection, analysis, visualization and communication using appropriate management information systems; Manages human resources and budgets for logistics operations; and Establishes process for monitoring and evaluating vaccine deployment activities.
- The Focal Point for Vaccination is Responsible for the vaccination component of the NDVP; Ensures appropriate communication and public information; Establishes processes for data collection and information using a management information system; Manages human resources and budgets for vaccination operations, and ensuring that (a) Adequate numbers, including surge capacity, Training, Supervision, and Establishes a process for monitoring and evaluating vaccination activities and vaccine safety surveillance.

40. ***On waste generation from the vaccination program***, the NDVP estimated that with a total of about 3.59 doses of vaccine, about 3.59 million of syringes and 35,853 safety boxes will be needed to vaccinate the entire priority groups. The number of vaccines, syringes and safety boxes has been estimated based on the following assumptions: Estimated target population for priority groups, Two-dose vaccine regime, Ten-dose vaccine in vial, and Expected wastage rate of vaccine and syringes and Wastage Multiplier Factor (WMF). Each COVID-19 vaccination team (either at fixed vaccination sites and mobile teams) is composed by three health professionals: two vaccinators and one assistant-volunteer. Supervision of the vaccination teams will be

conducted by a Provincial MCHC manager who will ensure communication and coordination with all vaccination sites (fixed and mobile) in the province.

41. On waste management capacity for the vaccination program, it was proposed that the National Immunization Program in Lao PDR which follows the WHO guidelines for safe management of wastes from health-care activities¹³ will be applied while FDD has developed a national legislation for the proper collection and disposal of medical waste, including injection waste—Regulation on destroying drugs and medical products (August 2016)¹⁴. Existing waste-disposal facilities are located in specific areas for incineration and for safe burial in landfill areas while some provinces have an incinerator and each district has a landfill area for safe burial of medical waste. Table 3.1 is an estimated amount of waste related to vaccination in Lao PDR. It was estimated that each vaccination site (fixed and mobile) will vaccinate approximately 150 individuals per day generating waste of vaccine vials, syringes and safety boxes.

Table 3.1 Estimated amount of waste generated per day and by province for COVID-19 vaccination, Lao PDR.

Province	Vaccination sites (fixed and mobile)	Number of vaccinations per day (150/team)	Number of generated vials (5-dose) per day*	Number of generated syringes per day [#]	Number of full safety boxes per day ^{\$}	Number of PPE used per day ^{&}
Attapeu	17	2,550	556	2,831	29	54
Bokeo	17	2,550	556	2,831	29	54
Bolikhamxai	23	3,450	752	3,830	39	72
Champasak	32	4,800	1,046	5,328	54	101
Houaphan	32	4,800	1,046	5,328	54	101
Khammouan	32	4,800	1,046	5,328	54	101
Louangnamtha	17	2,550	556	2,831	29	54
Louangphabang	38	5,700	1,243	6,327	64	120
Oudomxai	23	3,450	752	3,830	39	72
Phongsali	23	3,450	752	3,830	39	72
Salavan	26	3,900	850	4,329	44	82
Savannakhet	47	7,050	1,537	7,826	79	148
Vientiane Capital	37	5,550	1,210	6,161	63	117
Vientiane Province	35	5,250	1,145	5,828	59	110
Xainyabouli	35	5,250	1,145	5,828	59	110
Xaisomboun	17	2,550	556	2,831	29	54
Xekong	14	2,100	458	2,331	24	44
Xiangkhouang	23	3,450	752	3,830	39	72
Total	488	73,200	15,958	81,252	814	1,537

¹³ (https://www.who.int/water_sanitation_health/publications/wastemanag/en/)

¹⁴ (http://www.fdd.gov.la/download/contents_documents/1470661606Destroy_Drug_and_medical_Product.pdf).

* For five-dose vaccine in vials, the expected wastage rate is 8% (WMF=1.09); # For syringes, the expected wastage rate is 10% (WMF=1.11); § one safety box per 100 syringes & PPE required for 1,464 vaccinators per vaccination day. Expected wastage rate is 5% (WMF=1.05)

Note: for multi-dose vials, unused vaccine doses at the end of the session or after 6 hours will be discarded.

42. ***On collection and transport of waste***, all hazardous waste material (syringes, needles, vaccine vials and PPE) generated from the immunization sessions will be collected—as per MOH regulation on Health Care Waste Management Regulation 2017—and transported by road to the nearest waste treatment and disposal facility. Vaccine vials will be safely buried at the designated landfill area, while safety boxes containing sharps will be sealed and transported to district and then to the province for incineration or treated by autoclave (see methods for waste disposal below). Collection and transport of all hazardous waste material will be collected by trained personnel and properly equipped with protection materials. The frequency of collection, routes and destination of all medical waste generated by the immunization activities will be clearly defined by the Focal Point for Logistics with the provincial and district NIP staff.
43. On methods for waste disposal, waste disposal facilities include incinerators and autoclave for injection equipment (e.g. syringes and needles) and safe burial on specific sites for vaccine vials and PPE. These methods are currently used for waste management of routine immunization activities. On incineration and pressurized steamed treatment with autoclave, all 18 provinces have an incinerator for wastage from vaccination – vaccines, syringes, and sponges. After incineration, waste becomes non-risk waste and is finally disposed of in landfill sites. However, it was noted that on exceptional basis, mobile teams with no access to incinerators or autoclaves will safely collect, transport and disposed the safety boxes in burial pit at the nearest health center.
44. ***On safe burial in landfill sites for waste to be generated from the vaccination program***, each district has at least one landfill area for safe burial of hazardous health-care waste such as vaccine vials. The following rules are applied for health facility landfills: (a) Access to the disposal site is restricted to authorized personnel only; (b) The burial sites are lined with a material of low permeability, such as clay, to prevent pollution of any shallow ground-water that may subsequently reach nearby wells; and (c) The burial site is managed as a landfill, with each layer of waste being covered with a layer of earth to prevent odors, as well as to prevent rodents and insects proliferating.
45. ***On injection safety and management of bio-hazardous waste***. At the vaccination sites, vaccination teams will follow the essential rules for safe collection and manage of hazardous waste. Training for proper handling of hazardous material to vaccination teams will be conducted before the vaccination campaign and details are provided in section 8 of the NDVP (Human resources management and training). NIP has developed training materials for safe injection and waste management aimed at NIP staff and vaccination teams (Training on Immunization Safety in the Lao EPI managers’ training). General safe practices for proper handling of hazardous materials include: (a) Conduct good

practices for safe administration of the injection i.e. the use of auto-disable syringes is preferred because they prevent reutilization, reducing programmatic errors and needle stick accidents by health care personnel; (b) Management of multidose vials (if applicable): Use a different syringe to load each dose; (c) Use sterile injection equipment: Dispose of any needles that have been in contact with a non-sterile surface; (d) Inspect the integrity of the packing: Discard the syringes and needles with packaging that has been perforated, broken or damaged as a result of exposure to moisture; (e) Prevent needle injury: Recapping needles after injection is discouraged; (f) Appropriate collection and transport of safety boxes to the disposal sites: seal the safety boxes when full and before transportation and reopen the safety box will be prohibited.

46. ***Waste management strategy.*** Based on the current capacities, the NDVP stated that the NIP has developed a plan for campaign and routine immunization for safe injection and waste management which defines the procedures to ensure vaccination is given safely and to manage waste materials. To complete the waste management plan, the following activities have been planned: (a) Organization of training courses aimed at supervisors and personnel to comply with the laws, codes, standards, and practices that govern safe disposal of vaccination waste; (b) Prepare a "code of safe practices" for waste management; distribution of documents, SOPs and job aids on waste management; (c) Definition of performance indicators to monitor the quality of waste management and disposal and measure with the standards; (d) Designation of a trained supervisor at each level to ensure compliance with waste management procedures; and (e) Organization of exercises/simulation to test the plan and identify gaps and needs in order to review and update the plan accordingly.

3.2 MOH Capacity and ESF Implementation Performance

47. ***GOL/MOH Capacity and ESS Implementation Experience.*** The WB and other development partners (ADB, US Center for Disease Control (US CDC) through WHO, UNICEF, Save the Children, Korea, China etc.) have been providing technical and financial support to build GOL capacity to address pandemic and health issues during the past 15 years and recently for the response to COVID-19. The MOH is responsible for coordination and implementation of these projects and has experience implementing several WB financed projects including the application of WB safeguard policies including the on-going Health Governance and Nutrition Development Project (HGNDP, P151425), Health and Nutrition Service Access Project (HANSA, P166165), and the Lao PDR COVID-19 Response Project (LCRP, P173817). The HGNDP and HANSA apply the WB Safeguard Policies while the LCRP applies the ESF. The staff previously assigned by MOH for the implementation of the current projects will also be responsible for the preparation and implementation of the ESMF and other ESF measures for the parent project.
48. Under the parent project, MOH is responsible for ensuring that project activities are in compliance with the WB's ESF requirements. There are 18 people assigned by MOH on April 9, 2020 including two Director General, two Deputy Director Generals, technical staff and consultants from the Department of Planning and Cooperation (DPC),

Department of Healthcare and Rehabilitation (DHR), Department of Communicable Disease and Control (DCDC), National Health Insurance Bureau (NHIB), Health Promotion Unit, Mother and Child Health Center, HIV/AIDS and Sexually Transmitted Infection (STI) Control Center, and Consultant to support ESS risk management under the project. The Project Coordination Office (PCO) of DPC is responsible for overall coordination of the parent project as well as other development partners. This arrangement will be applied to the Project. At present two ESF consultants (ESFC) have been mobilized and on board and they are working closely with the implementing agencies to prepare the ESF workplan and conduct ESS screening for the activity/subproject.

49. ***ESF implementation experience of the parent project.*** Prior to the preparation and implementation of the parent project, the Project Implementing Entities (PIEs) of MOH including PCO of DPC have limited capacity and experience on the implementation of ESF due to the turnover of staff involved in previous pandemic response projects. The parent project implementation in first year, 2020 mainly focused on priority meetings and training at central and local areas considered priority for COVID-19 emergency actions and emergency procurement of equipment, PPEs, cleaning solutions, and procurement of vehicles. Nonetheless, follow-up meetings and extensive discussion and implementation supports¹⁵ has been provided by WB team starting July 2020 when less restriction on movement is allowed in Lao PDR while more information on the project activities is available in late 2020. In September 2020, the first ESF consultant (ESFC1) was mobilized and has been on board. The second ESFC has been on board in mid-February 2021. While the consultants and PCO still need support from the World Bank, their capacity and knowledge of ESF has improved in early 2021. Initial reviews of proposed activities for the parent project suggested that 7 national PIEs have been assigned for implementation of project activities and discussion on the plan on construction of new and retrofitting of small healthcare facilities (HCF) and rehabilitation and/or improvement of water supply, sanitation, hygiene, and wastewater treatment of existing hospitals and HCFs has been initiated. Given that the activities will apply different level of ESF instruments and only those that are related to civil works will require the preparation of an ESMP including ICWMP, IPC, HCWMP, LMP, SEP and/or ESCOP, mobilization of national consulting firm and/or a qualified national consultant may be necessary to ensure that the facilities are properly designed and documents are prepared for WB clearance before construction begins. As assigned by the national PIE, the provincial and district offices and/or the hospital or HCF owner can play the roles of supervision of civil works and implementation of activities at local level in close coordination and cooperation with other agencies and key stakeholders at local level.
50. It is also noted that during 2014-2019, MOH has established a number of regulations related to hygiene and waste management including those related to hazardous and sharp wastes. However, given limited capacity and budget of MOH, in light of COVID-19 risk, it is necessary to ensure that these facilities are operated effectively (at least meeting the national standards) after construction and/or retrofitting/rehabilitation are completed. Training and capacity building and budget as well as standard operations procedures (SOPs) have to also be in place to ensure effective and sustainable operation of these

¹⁵ The supports focusing on providing guidance on the ESMF requirements, requesting for the project implementation plan and activities and clarifying the needs for the ESS screening, and providing comments on the draft TORs for the ESF consultants (individual and firm).

facilities will also be necessary. With the AF, adequate budget will also be allocated to ensure quality of the TA and implementation of the ESMP and ESF plans, as agreed with WB. Due to the urgency of the COVID-19 response, priority training, meetings, and procurement of necessary equipment (PPE, etc.), medicines, and vehicles were initiated in mid-2020 and some activities have been completed. Other development partners (such as WHO and UNICEF) have also been playing an active role on providing TA and training including procurement of equipment (including 25 units of autoclaves) and medical supplies. In mid-2020, WHO and UNICEF developed an interim guideline on water supply, sanitation, hygiene, and health facility improvement tool (WASH-FIT) which is being used by DHHP for training and this will be continued under the AF.

51. For practical reasons, it has been agreed that each PIE will be treated as a activity/subproject and an ESS screening will be conducted to assess the risks and impacts while preparation of an ESS workplan for each activity/subproject (each PIE) will be sent to WB for clearance. The two ESCFs will also provide training on the ESF implementation especially those related to ESMF, ESMP, SEP and LMP application as well as be responsible for supervision, monitoring, and preparation of ESF implementation report to WB. However, in light of the AF appraisal and the needs to update the ESCP, ESMF, LMP, and SEP for the AF (in March-April 2021), it is likely that most of the ESS screening and ESS workplans for the activity/subproject will be finalized and submitted for WB review and clearance before implementation of the AF activity. The ESFCs will review adequacy and compliance of all activities and include the results in the first ESF implementation monitoring report. These 2 ESFC will also be responsible for ensuring full compliance of the ESF for the AF. Guidance on the training on this aspect will be provided by WB staff to ensure adequate capacity of the implementing agencies to identify potential ESS risks and impacts and prepare and implement the ESSs instruments.

3.3 WB's ESS Relevancy and Guidance Related to COVID-19

52. **WB's ESSs Relevant to the Project.** Similar to the parent project, the ESS risk is classified as 'Substantial' for the Project. The six ESSs that have been screened as relevant to the Project are ESS1, ESS2, ESS3, ESS4, ESS7, and ESS10. The screening of social risks and impacts is based on discussion with the task team and consultations with MOH. The ESMF has also taken into account the national requirements as well as the application of an international protocols for infectious disease control and medical waste management.
53. As defined in the Project's ESCP and SEP, monitoring of ESMF implementation will be through 6-month and annual ESF monitoring reports submitted to WB, while consultations and public information disclosure will be made throughout the entire project cycle. It is expected that the SEP will be revised periodically and incorporate the evolving WHO guidance on Risk Communication and Community Engagement and on preventing and addressing social stigma associated with COVID-19. GRM operations have been integrated into the revised SEP taking into account the results from further communication to affected and interested stakeholders. The SEP and ESCP were disclosed through the website of the Food and Drugs Department (FDD) of MOH: www.fdd.gov.la. Updated versions of the SEP, as well as this ESMF, will be disclosed on the same website and on the World Bank Group (WBG) website during project implementation.

54. The WBG’s Environmental, Health, and Safety (EHS) Guidelines, such as those related to Community Health and Safety will apply to the extent relevant. The Project will also rely on standards set out by WHO and the WBG in relation to COVID-19 and vaccination strategy and deployment. Beyond this immediate concern, Project implementation needs to also be responsive to the needs of marginalized and vulnerable social groups who may be unable to access facilities and services designed to combat the disease. To mitigate this risk MOH, in the ESCP, is committed to the provision of services and supplies based on the urgency of the need, in line with the latest data related to the prevalence of the cases.
55. **WBG Response to COVID-19.** During 2020, in response to COVID-19 outbreak, WBG has developed a number of guidelines in response to COVID-19 including, but not limited to, a guideline for the preparation of a Contingency Plan for Project Sites, a Technical Note on Public Consultations and Stakeholder Engagement to be applied to projects under implementation and those under preparation, a template for ESMP preparation and a template plate for ICWMP. For ESS1, the WBG also identifies risks and mitigations measures for the transactions involving specific project finance activities (i.e. works, goods, services, technical assistance, and research activities) including procurement and development of systems for deployment of safe and effective vaccines for COVID-19. In late 2020, the WB also updated the templates for the preparation of ESF documents (ESCP, ESRS, ESMF, SEP, and LMP) for COVID-19 project including procurement and deployment of safe and effective COVID-19 vaccines. The guidance has been considered during the preparation of this ESMF and the preparation of technical guidelines provided in annexes.
56. **Associated facilities¹⁶.** Implementation of the parent project and the AF will involve activities being implemented with supports from other international partners (WHO, UNICEF, ADB, etc.) while construction and operations of the new and/or retrofitting HCF facilities to be carried out under DHR activity/subproject and DHHP activity/subproject may be related to the off-site land-fill and/or incinerators. These Project activities and the off-site facilities will not be considered as Associated Facilities since they do not meet all the three criteria established for the application of this term. Nonetheless, PCO of DPC will ensure that supports from the international partners will not be duplicated but complimented when possible. For the new HCFs, PCO of DPC will collect information on conditions and performance of the related off-site treatment facilities such as the incinerator and landfills to be used for final disposal of the project wastes during the preparation of the ESMP for these subprojects/activities.

Section 4. Environmental and Social Baseline

4.1 Environmental Baseline

¹⁶ According to WB ESF policy, the term “associated facilities” means facilities or activities that are not funded as part of the project and, in the judgement of the WB, are (a) directly and significantly related to the project; (b) carried out or plan to be carried out contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed expanded or conducted if the project did not exist. For facilities or activities to be Associated Facilities, they must meet all three criteria.

57. **Locations, natural resources, and population.** Lao PDR is a landlocked and lower-middle-income country that shares borders with countries highly affected with COVID-19 outbreaks, such as Thailand, Vietnam, Cambodia, Myanmar, and China. Majority of the country area (236,800 km²) is mountainous and rich in water, forest, and other natural resources and biodiversity and 24 conservation forest areas. Majority of the total population of about 7.1 million live in rural and remote areas with limited access to communications, transport, health, and education services. Lao PDR's gross domestic product (GDP) grew over 7 percent per year over the past decade but experienced a historical low of 5.2 percent in 2019, owing mainly to natural disasters (floods, droughts, a caterpillar infestation) which mainly affected the agricultural sector. Economic growth has been heavily concentrated in urban areas while in rural areas and among ethnic minorities, high levels of poverty and inequality prevail.
58. Water, soil, and air quality in Lao PDR is generally considered good, except in some specific areas and/or seasons. In Vientiane Capital and other large urban areas (such as Savannakhet, Pakxe, and some specific areas affected by water pollution due to untreated waste discharge and air pollution mostly due to dust from construction and transport. In Lao PDR, waste management capacity is very limited and becoming problematic due to economic development and population increase and urbanization. As seen in Table 4.1 below, 87% of health centers in 14 project provinces have existing running water or water container to use for cleaning facilities and disinfecting medical equipment. Over ninety percent (93%) of health centers have at least 1 latrine, and in Bokeo, Luangprabang and Huaphan provinces all health centers have latrine.

Table 4.1: Water and sanitation in health facilities at 14 HGNDP provinces

Province name		Phongsaly	Luangnamtha	Oudomxay	Bokeo	Luangprabang	Huaphanh	Xayabury	Xiengkhuang	Savannakhet	Saravane	Sekong	Champasack	Attapeu	Xaysomboun	Total
Water supply	Running water available or at least 20 litres for each delivery	26	36	40	36	75	70	58	47	112	62	20	55	26	13	676
	% per total HC	57%	88%	74%	90%	91%	95%	74%	84%	72%	87%	71%	73%	72%	72%	79%
	Facility has running water or water containers available	36	38	49	36	76	72	66	50	128	67	27	60	26	16	747
	% per total HC	78%	93%	91%	90%	93%	97%	85%	89%	82%	94%	96%	80%	72%	89%	87%
Latrine	Facility has water chlorine treated	4	23	17	13	16	15	21	24	50	34	7	39	19	2	284
	% per total HC	9%	56%	31%	33%	20%	20%	27%	43%	32%	48%	25%	52%	53%	11%	33%
	HC has at least 1 toilets/latrines	39	38	51	40	82	74	69	52	141	66	27	65	31	16	791
	% per total HC	85%	93%	94%	100%	100%	100%	88%	93%	90%	93%	96%	87%	86%	89%	93%
Latrine	Toilets/latrines can be flushed with running water or sufficient quantity of water in container with scoop	29	37	43	39	75	70	59	51	117	64	23	61	31	16	715
	% per total HC	63%	90%	80%	98%	91%	95%	76%	91%	75%	90%	82%	81%	86%	89%	84%
	Total number of HC	46	41	54	40	82	74	78	56	156	71	28	75	36	18	855

Source: HGNDP, downloaded from the District Health Information Software (System) version 2 (DHIS2)

59. **Urban population and solid waste management.** According to the Solid Waste Management in Vientiane report issue in 2018 by the Global Green Growth Institute (GGGI), about 820,900 people (2015) live in Vientiane, the capital of Lao PDR. Roughly, about 600 tons per day of waste are generated in Vientiane capital (2017). There are no policies or regulations, either at the national or city level, in support of waste-to-resource approaches or the principles of Reduce, Reuse, Recycle (3R). There are two main

ministries responsible at the National level for solid waste management that are the Ministry of Natural Resources and Environment (MONRE) and Ministry of Public Work and Transport (MPWT). In Vientiane, the main government body responsible for solid waste management is the Vientiane City Office for Management and Service (VCOMS). VCOMS oversees the collection, transport and disposal of solid waste generated in Vientiane. No precise figures exist on waste collection coverage, but it is estimated that 30-50% of the waste generated in the city is collected by VCOMS or any of the eight private collection companies contracted by VCOMS. At present, VCOMS is collecting 40-50% of total generated waste and the rest are collected by eight private local companies.

60. *The medical waste* is considered as an urban waste and MOH is responsible for handling it including collection and storage. According to a decree No. 1706 /MOH, 2/7/2004, waste generated in health care facilities needs to be separated into three types including infectious, sharp and general waste. The European Union provided disinfection facilities to various healthcare facilities. There is an incinerator installed in the landfill at kilometer 32 (KM 32) outside of Vientiane. The medical waste from healthcare facilities will be segregated, disinfected and then transfer to the incinerator at KM 32 for disposal. However, the system needs to be assessed and strengthened, especially, at the provinces for treatment of healthcare waste generated as resulted from COVID-19 outbreak.
61. Table 4.2 shows that 89% of health centers in 14 project provinces have no medical waste and dangerous objects in courtyard, however, there only 24% of health centers which have incinerators to burn medical and non-medical waste. Table 4.3 indicates three indicators related to infection control at health facilities being collected for HGNDP. For other HANSA project, the sharp waste management guideline is used as a tool for infectious control.
62. **Use of small-scale incinerators for healthcare waste treatment.** Lao PDR is a signatory of Stockholm Convention on Persistent Organic Pollutants (POPs). The national implementation plan under Stockholm Convention is approved but actions for reducing and eliminating the release of unintentionally proceeded POPs have not yet been implemented. Assessment for HANSA Project confirmed that the existing healthcare waste incinerator design, which is described in the MOH's Agreement No 480/MH dated 14/2/2014 on community hospital standard, no longer meets modern emission standards. Assessment conducted by MONRE confirmed also that hospital/medical waste incineration is the 2nd largest source of emission of dioxins and furans to the air in Lao PDR.

Table 4.2: Health Care Waste Management at the Facility Level

Province name	Phongsaly	Luangnamtha	Oudomxay	Bokeo	Luangprabang	Huaphanh	Xayabury	Xiangkhuaug	Savannakhet	Saravane	Sekong	Champasack	Attapeu	Xaysomboun	Total
Availability of a garbage bin with lid in courtyard for patients and visitors – not full	33	36	36	33	63	66	54	44	107	63	18	61	25	13	652
% per total HC	72%	88%	67%	83%	77%	89%	69%	79%	69%	89%	64%	81%	69%	72%	76%
Evacuation of waste water in sewage system or sanitary pit	35	38	43	35	76	71	53	49	118	61	25	60	27	15	706
% per total HC	76%	93%	80%	88%	93%	96%	68%	88%	76%	86%	89%	80%	75%	83%	83%
Facility drains water on city sewage system or has waste water collection system	27	37	40	32	56	71	28	47	76	61	20	47	22	12	576
% per total HC	59%	90%	74%	80%	68%	96%	36%	84%	49%	86%	71%	63%	61%	67%	67%
Incinerator to burn medical, non-medical waste is functional and clean	4	7	9	12	30	17	17	16	31	22	4	14	14	7	204
% per total HC	9%	17%	17%	30%	37%	23%	22%	29%	20%	31%	14%	19%	39%	39%	24%
Incinerator to burn medical, non-medical waste with well-built fence around with door locked	4	8	6	8	12	17	7	15	21	10	1	12	6	4	131
% per total HC	9%	20%	11%	20%	15%	23%	9%	27%	13%	14%	4%	16%	17%	22%	15%
No medical waste and dangerous objects in courtyard such as needles, syringes, gloves, used compresses, etc.	40	38	51	36	78	73	63	53	126	64	28	63	30	16	759
% per total HC	87%	93%	94%	90%	95%	99%	81%	95%	81%	90%	100%	84%	83%	89%	89%
Total number of HC	46	41	54	40	82	74	78	56	156	71	28	75	36	18	855

Source: HANSA, Health and Nutrition Services Access Project. ESMF.

Table 4.3: Infection control at the facility level

Province name	Phongsaly	Luangnamtha	Oudomxay	Bokeo	Luangprabang	Huaphanh	Xayabury	Xiangkhuaug	Savannakhet	Saravane	Sekong	Champasack	Attapeu	Xaysomboun	Total
Non-contaminated objects w aste pit fenced	9	19	9	23	31	46	13	10	48	17	7	23	9	6	270
% per total HC	20%	46%	17%	58%	38%	62%	17%	18%	31%	24%	25%	31%	25%	33%	32%
Non-contaminated objects w aste pit minimum 3 meter deep	21	30	31	29	56	47	21	31	85	45	11	39	19	13	478
% per total HC	46%	73%	57%	73%	68%	64%	27%	55%	54%	63%	39%	52%	53%	72%	56%
Non-contaminated objects w aste pit w without infected non-decomposable objects	29	37	37	32	60	66	21	40	83	47	20	40	22	12	546
% per total HC	63%	90%	69%	80%	73%	89%	27%	71%	53%	66%	71%	53%	61%	67%	64%
Total number of HC	46	41	54	40	82	74	78	56	156	71	28	75	36	18	855

Source: HANSA, Health and Nutrition Services Access Project. ESMF.

63. **On waste management due to vaccination program**, the NDVP highlights the need to ensuring adequate waste and ensure adequate financing of plans, use existing national healthcare waste management legislation to identify gaps in waste treatment and disposal at facilities, invest in waste management and disposal infrastructure, and structuring the collection and transportation of the waste to the disposal sites identified, and implement waste collection, transport, and disposal plan. It is also identified the need for setting up a specific authority for waste management for hazardous waste storage; Development of protocols and guidelines & putting systems in place; and Disseminate waste management guidelines and standard operation procedures (SOPs) at national and subnational levels. There is also a plan for Gavi/WHO funding (\$250k) to be used for procuring, install and operationalize 50 incinerators for district hospitals, however, this will be confirmed.
64. Nonetheless, it is expected that additional new autoclaves will also be procured under the AF. At this stage, it is considered that application of the on-site autoclave is appropriate for a small country like Lao PDR. In addition, the AF will also provide budget to support TA, capacity building, including the tipping fee for the off-site waste treatment/disposal. However, a due diligence of the off-site facilities will be made during the preparation of the ESMP before the sites can be adopted for used by the Project. On-the-job training

and monitoring of these equipment and facilities will be conducted during the implementation of the AF.

65. Given the AF support to the deployment of vaccines, the implementation challenges and lesson learnt from the parent project related to WASH facilities operations and need for improvement as well as staff capacity on solid waste management and safety aspects are expected to be available after the initial assessment to be conducted by DHHP, DHR, and other activities/subprojects. More information is likely to be available in July-September of 2021.
66. ***Capacity assessment on adverse events following vaccination (AEFI/AESI) and vaccines safety, and cold chain (see Annex VIII).*** In addition to the management measures related to wastes from vaccination discussed above, the NDVP assessed capacity of the national system to monitor, investigate and respond to adverse events following vaccination (AEFI) and adverse event of special interest (AESI); vaccine safety and cold chain capacity assessment; and the risks related to transport, storage, handling, and disposal of vaccines. The NDVP highlights the different cold chain conditions that COVID-19 vaccines need and the requirement for correct temperature monitoring in line with CDC guidance (para 24). Results from the assessments suggested that MOH existing capacity and procedures are not yet adequate both at central and provincial levels. However, NDVP has established a post-deployment surveillance plan to monitor safety and effectiveness of COVID-19 vaccines focusing on building capacity of key agencies to investigate, analyze and manage any AEFI and AESI. Measures to handle vaccines safety and how to address limited cold chain capacity in the country and mitigate the risks related to transport, storage, handling, and disposal of vaccines have also been identified. The needs for ensuring that adequate training on vaccines deployment and provision of PPEs, equipment, etc. as well as measures to address communications risks before and during implementation of vaccine deployment are also considered necessary. More details are provided in Annex VIII. Many development partners (such as WHO, UNICEF, Gavi/COVAX, USCDC, ADB, DFAT, etc.) have been providing technical and funding supports to GOL.
67. ***AF supports on capacity building for cold chain.*** Gaps identified by the AF are (a) Inventory storage needs to be identified and supply monitored through mSupply; (b) Standard Operations Procedures (SOPs) on the effective vaccine management (EVM) need to be finalized to strengthen the distribution strategy; (c) An evaluation will help to improve IT infrastructure at HCF facilities; and (d) Along with the appointment of a specific authority responsible for waste management, performance indicators will contribute to monitor the quality of waste management. On the vaccine, cold chain, logistics, infrastructure, Gavi and WHO provide cold chain equipment and infrastructure support while GOL has now also started to support cold chain maintenance. GOL expressed preference for receiving approved vaccines requiring temperatures between +2 and +8 °C, as majority of cold chain capacity is between +2 and +8 °C in Lao PDR, and later expanded for all types of vaccines through COVAX since February 2021. It is estimated that about 60 percent of health centers and 70 percent of hospitals suffer from interruptions of power supply in Lao PDR while the NIP in Lao PDR developed a waste management plan based on current capacities. In this context, the AF supports have been designed to fill part of the gaps related to planning and coordination; budgeting; prioritization, targeting, surveillance; service delivery; training and supervision; monitoring and evaluation; vaccines cold chains; safety surveillance; and demand

generation and communication of the NDVP. The AF will also provide support the activities related to transportation; maintenance of the cold chain system and storage room; IT equipment for health facilities; and waste management at community level and point of services. When possible, the HEPRTF TA (Component 4) will also explore an opportunity to apply other alternative energy supply sources for cold chain capacity, especially during power outages and natural disasters as well as reducing costs for transportation which is high due to the need to import fuels.

68. ***Energy efficiency and conservation.*** The GOL, with support from UNICEF, has provided generators and is in the process of procuring additional generators for vaccine storage cold rooms, and has made provision for around 80 cold chain equipment that will function without electricity, in the event of power outages. In addition, UNICEF is recruiting a private company and individual cold chain technicians for rapid cold chain monitoring and maintenance. It is also expected that the AF (through HEPRTF support), efforts will be made to assess the possibility of improving energy efficiency through energy saving and/or application of the solar PV in selected HCFs and/or WASH facilities. Vaccine storage rooms will be repaired with energy efficiency considerations incorporated into repair designs while low carbon procurement policy will also be adopted when furnishing these facilities with equipment. Efforts will also be made to assess the potential risks and impacts (positive and negative) related to reduction of GHG emission and/or climate hazards.

4.2 Social Baseline

69. About two thirds of Lao's population lives in rural and remote areas without, or limited access to, social services, particularly health facilities. On average, Lao people are approximately 40km from a health center and may spend 2.5 hours trying to get there in the dry season, or over 3 hours in the wet season. The coverage and quality of health services is a persistent problem, disproportionately affecting women, children and the poor. This poses a big challenge in terms of COVID-19 response. This also presents challenges in terms of reaching priority groups for vaccines. For instance, there will be challenges in reaching elderly people who live in remote locations. Identifying populations who have underlying medical conditions like diabetes will also be a challenge given remoteness and lack of digital health records. Vaccine deployment planning and communications strategies being developed will need to take this into account to ensure remote populations are not left out of vaccination efforts and that priority groups can be well identified. Depending on the vaccine available in Lao, logistics will need to include consideration of particular temperatures that the vaccine must be kept at, and the logistics of getting the vaccine to various places and/or ensuring remote populations can mobilize to reach the vaccine in specific locations. The NDVP is a strong document which recognizes some of these challenges and describes logistics.
70. COVID-19 prevention also faces the challenge that nearly half the population does not have access to soap. Although the proportion of household members using improved sources of drinking water has reached 84 percent, households with a handwashing facility, where water and soap or detergent are present, remains low at 54 percent. Therefore, messages around handwashing – key for COVID-19 prevention – clearly have limitations. What is more, about 25 percent of health centers and more than 50 percent of district hospitals have no access to safe water supply. This is a big challenge as high standards of sanitation and waste management are necessary in hospitals treating

COVID-19 patients, in order to prevent the risk of infection to medical staff, other non-health personnel and other patients. Women in particular may be at risk, given that they are disproportionately represented in the health sector (in particular as nurses, cleaning and support staff). In addition, 60 percent of health centers and 70 percent of hospitals in Lao suffer from interruptions of power supply, another challenge given that respirators are key in COVID-19 treatment.

71. Lao PDR is made up of 50 ethnic groups, with the Lao Tai comprising about 65 percent of the population while the other three ethnic families (Mon-Khmer, Hmong-Iu or Iew Mien and Chino-Tibet) make up the remaining 35 percent. These ethnic minority communities are particularly vulnerable and poor as most of them are located in rural and remote upland areas. Often due to their geographical location, these populations have comparatively less access to public services, productive land and markets. In addition, cultural and linguistic differences may contribute further to their isolation. As such, the higher incidence of poverty makes upland, remote, ethnic minority populations particularly vulnerable socially and economically. Moreover, cultural beliefs may impact on ethnic group's willingness to vaccinate against COVID. There is not enough understanding at this stage of demand-side barriers to vaccination – i.e. willingness of people to vaccinate against COVID – and this could be more enhanced in remote, ethnic groups who may have beliefs about whether or not to vaccinate, when, etc.
72. Remoteness, as is social isolation, could be a form of protection, if managed correctly, or devastating if not. For instance, as of April 2020, the few countries not reporting COVID-19 cases are remote islands, mostly in the Pacific Ocean. However, for remoteness to be effective protection, clear quarantine measures and migration controls need to be in place. In the case of Lao PDR, remote communities could be protected from the virus due to their remoteness, but only if there were quarantine or other measures for people coming in/out of a remote community. On the other hand, if remote communities experience cases of the virus, they face difficulties in accessing health care and potentially devastating consequences.
73. The low levels of education in remote communities, particularly some ethnic groups, as well as language barriers, could also pose a challenge in terms of having in place effective communication messages that are followed and understood about the COVID-19 pandemic, especially prevention methods. It is likely that ethnic groups will have their own beliefs about the pandemic, how to prevent it and treat it, which may be at odds with WHO recommendations. This may also be the case in terms of their beliefs on immunization. It will therefore be important to get the buy-in and support of influential leaders in communities and helping them spread factual information about COVID-19 prevention, symptoms, treatment and the importance of vaccination.
74. According to the NDVP, Lao PDR has a comprehensive and robust national immunization program (NIP) providing safe and effective routine immunization to children¹⁷. In addition, in 2010-2011, MOH conducted a national-wide vaccination campaign against pandemic influenza virus -Influenza A(H1N1) pdm09- with high vaccination coverage in the target groups and more than 1 million people were

¹⁷ https://apps.who.int/immunization_monitoring/globalsummary/countries?countrycriteria%5Bcountry%5D%5B%5D=LAO

successfully vaccinated¹⁸. This experience with routine immunization and pandemic vaccines should position Lao PDR to be better prepared to identify target groups for vaccination and deliver vaccines in the current COVID-19 pandemic.

75. A considerable segment of the population in Lao PDR migrate in/out of Thailand on a regular basis. These border crossings also pose a considerable risk in the spread of the virus. Vulnerable populations would be the most at risk of virus transmission, including: elderly people; children, particularly those that are malnourished; those with underlying health conditions e.g. diabetes, cancer, hypertension, coronary heart diseases, and respiratory diseases, among others; persons with disabilities including physical and mental health disabilities; single parent headed households, male and female; poor, economically marginalized, and disadvantaged groups; and ethnic groups. With only 47 cases confirmed as of March 7 2021, widespread transmission of COVID has not been an issue as of yet. Part of this is given how quickly Lao moved to close its borders. Passengers flights out of Lao remain closed as of early 2021 and all land borders have been shut to foreign nationals except for medical and other special reasons. However, some opening of the borders with Thailand was started in late 2020 with strict 14-day quarantine requirements, though mostly for the transport of goods. Nevertheless, as borders are lifted, there will be a need to ensure the migrant population can access the vaccine as they will be some of the most exposed groups to the virus.
76. According to the WHO¹⁹, Lao's overall rate of childhood vaccination in 2019 is between 60-80%. This suggests that vaccination programs are still facing hurdles, most likely as a result of barriers in accessing health centers and overall population knowledge on the benefit of vaccines. With this in mind, strong efforts will be needed to ensure country-wide uptake of the COVID vaccine.
77. Based on an understanding of key determinants of violence against women Gender-Based Violence (GBV) and Violence Against Children (VAC) in Laos, risks may be exacerbated by the economic, social and mental strains of the pandemic as well as social isolation and lockdown measures. Social services may also be focused on the COVID-19 outbreak and unable to respond. Based on a 2021 report²⁰, women in Lao have faced strong impacts from COVID-19 isolation measures, including significantly higher rates of maternal deaths (predicted at 90-140%) and higher rates of unintended pregnancies (predicted at 15-24%). Moreover, the UNFPA report details that instances of child sexual abuse – particularly rape for girls under 18 years of age -- have increased amidst COVID-19 due to the associated lockdown measures. An effective mechanism that may promptly respond to women's grievances regarding SEA/SH, GBV, VAC or child labor should be

¹⁸ The Lao Experience in Deploying Influenza A (H1N1) pdm09 Vaccine: Lessons Made Relevant in Preparing for Present Day Pandemic Threats. Plos One. April 2015.

¹⁹ WHO vaccine-preventable diseases: monitoring system. 2020 global summary:
https://apps.who.int/immunization_monitoring/globalsummary/countries?countrycriteria%5Bcountry%5D%5B%5D=LAO&commit=OK

²⁰ CDR-MPI LAO PDR, EPRI, UNFPA LAO PDR, UNICEF LAO PDR (2021) Impact of Covid-19: Safeguarding Women's Health and Entrepreneurship

initiated in consultation with government departments and/or CSOs that support these areas.

Section 5. Potential Environment and Social Risks and Mitigation

5.1 ESS Risks and Mitigations

78. The Project will finance procurement of goods, vaccines and its deployment, services, technical assistance, and incremental cost considered necessary for responding to COVID-19 outbreaks as well as construction of one-story building for new HCFs, toilet and washrooms and retrofitting of existing WASH facilities in target HCFs. Potential environmental and social risks and impacts are briefly described below while details are provided in Annex III (also see Table 5.1). The mitigation measures will be updated and finalized when locations, types, and nature of the Project activities/subprojects have been identified and confirmed. Issue related to Life and Fire Safety (L&FS) will also be included as a potential risk when carried out physical civil works and renovation works for healthcare facilities (HCFs). The L&FS risk assessment and management effort will also cover at the institutional isolation facilities.
79. The NDVP has reflected all targeting criteria and implementation plans for the vaccination program in Lao PDR. There may be another potential risk on the increase incidence of reprisals and retaliation especially against healthcare workers and researchers. This risk is considered low given that the immunization law (2018) Article 15 clearly stated that citizens will be immunized on a voluntary basis and the ESMP and SEP has clearly identified that forced vaccination will not be supported by the Project. The NDVP clearly stated that vaccination is a voluntary program and the peoples can make their direct grievance heard through the national assembly committee established at national and local levels and forced vaccination that may arises related to any mandatory aspect of the national program is unlikely. Nonetheless, this issue will be examined in more detailed during the preparation of an ESMP for the vaccination program to be completed before the activities are implemented while the WB team will monitor the implementation of the vaccination program closely to ensure that force vaccination will not be acceptable. Preventive measures will be integrated into the IEC materials and monitored during implementation of SEP and this ESMF. In addition, the grievance mechanism (GRM) required under the ESF has been established under the parent project and it will be in place and equipped to address community, workers, and/or individual grievances related to the force vaccination issues as well as those related to labor and working conditions, and SEA/SH.
80. ***Risks due to vaccines safety*** (Annex VIII). Due to easy spreading and damage when affected with COVID-19, especially to those elderly and vulnerable groups, COVID-19 vaccination is strongly recommended by health doctors/physicians and high-level decision makers in most countries and most of the vaccination cost are free. Available evidence on safety of current COVID-19 vaccines indicate that they are well tolerated, with mild reaction reported, including local reaction at injection site, headache and fever. Reports on efficacy and safety of candidate vaccines is available at the WHO website²¹. Unless a person develops a contraindication to vaccination, they should be encouraged to complete the series even if they develop post-vaccination symptoms in order to optimize protection against COVID-19. Before vaccination, vaccinators should counsel

²¹ <https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines>

to the vaccine recipients about expected local and systemic post-vaccination symptoms. Antipyretic or analgesic medications may be taken for treatment of post-vaccination symptoms. Risk due to communication and response to serious AEFI will also be substantial and effective communication strategy will have to be implemented during the introduction of COVID-19 vaccines as misinformation may spread rapidly. Monitoring of post-deployment surveillance system and effective/continuous implementation of NIP are considered priority.

81. ***Potential impacts due to civil works of new HCFs, toilet and washrooms, and retrofitting of WASH facilities.*** The Project will finance new construction activity and some small physical renovation and retrofitting of health care facilities (HCF) including quarantine facilities and isolation rooms, and laboratory that may be done in the same existing or nearby buildings, without any requirement for land acquisition. These activities may generate limited adverse environmental impacts such as dust, noise, vibration, waste, solid waste and safety issues. These impacts are assessed to be of small scale, localized, in short-term period and manageable if good design and construction practices are followed. In the case of physical construction and renovation works to be financed, the ESCOP will be applied and implemented to avoid any possible impacts during the execution of the construction and renovation works. A contractor will be hired to implement the construction and renovation works. For a small works, as agreed with WB, the staff assigned by MOH may be responsible for supervision of construction works. PCO and the ESFCs will ensure that the works are in compliance with the ESCOP. A generic ESCOP is provided in Annex VI.
82. For the new construction of HCF and/or renovation/retrofitting of significant number of small civil works, hiring of a national consulting firm and/or qualified individual consultants will be required for the preparation of ESMP and other ESF instruments (ICWMP, IPC, HWMP, LMP, SEP, etc.) to mitigate potential negative impacts of works during construction as well as building capacity of the agencies responsible for operations of the facilities to ensure effective and sustainable operations of the facilities during operations phase. These consultants will also be responsible for preparation of detail design and BD/CD for construction and/or rehabilitation. No land acquisition or household resettlement would be required for the new activity, as the new facilities will be constructed within the compound of public hospitals located in the state land owned by MOH. This will be confirmed through an ESS risks and impact screening exercise to be carried out by the ESF consultant.
83. There are risks in terms of labor and working conditions due to the construction works and operation of new HCFs. For construction of new HCFs, it is expected that locally hired workers (most likely a larger number than if it was simply refurbishment) will be hired. Given it is new construction, there will also be a need for more construction materials and equipment than was originally envisioned under the parent project when the focus was on renovation. There may be risks of occupational health and safety (OHS). While workers are expected to be locally hired, there could be a need to set up small labor quarters/camps (particularly if there are workers from other provinces), which based on Lao standards may be small and lack proper hygiene, in particular with regards to COVID-19 prevention measures. Thus, the existing labor management procedures (LMP) including grievance redress mechanism (GRM) and OHS measures provided in the project's ESMF have been updated to ensure OHS risks are adequately covered and managed. During operation of the new HCFs, there may also be risks associated with the

operation of these new facilities especially the potential increase in infectious and communicable diseases from potential increase number of patients and waste, and the capacity of health workers to ensure safety and dignity of the isolated patients. The WBG's Environmental, Health, and Safety (EHS) Guidelines (including those relating to OHS), will be applied as per this ESMF.

84. Construction of new HCF are expected to be near existing facilities that are being used by health workers and patients who are vulnerable, and this could create additional risks on community health and safety. Patients, visitors and local communities surrounding or nearby the construction sites may be exposed to increased health and safety risks during the construction such as accidents, dust, noise and disturbance caused by transport of construction materials, transmission of COVID, Sexual Exploitation and Abuse (SEA)/ Sexual Harassment (SH), gender-based violence (GBV) and violence and abused in children (VAC). The operation of the new HCFs also has the potential to increase the number of patients and stretch the limited capacity of health staff to cope with potential influx of patients especially laborers returning from neighboring Thailand. Increase in hazardous waste generated and toxic chemicals such as used solvents from laboratory from the new HCFs in the hospitals may pose more safety risks to health personnel and workers. Although foreign contractors and workers will not likely be hired for construction of the new HCFs, local workers – some which may potentially come from outside the communities -- will be hired for the construction works and there may be a need to set up small worker's quarters/camps, which may lead to increase in the above identified risks. OHS measures will be applied to the extent relevant and closely monitored by the project in line with the EHS Guideline that are already in place. Workers will be expected to sign and follow the Code of Conduct and to receive training on appropriate behavior before starting work.
85. There may be some individual ethnic households living in the local communities nearby the proposed construction sites and new HCFs to be constructed, particularly in Sekong and Attapeu. However, all construction will be undertaken in existing land in health centers, owned by MOH, and as such there will be no land acquisition or economic displacement as a result of new construction. Nevertheless, there could be some potential risks and impacts on these ethnic households as a result of construction activities, which can be sufficiently managed through the existing SEP and ESMF. An inclusive and consultative process, provided for in the SEP, will be applied to ensure that the ethnic communities and people are well informed of the new activity, associated risks and impacts (both positive and adverse) and ensure they will be able to access and benefit from the new HCFs in an inclusive and culturally sensitive manner.
86. ***Potential impacts due to goods, services, and supplies.*** Delivery of these goods and services may increase the transmission of the disease if proper measures are not being in place and implemented. The imported materials may be contaminated and handling during transportation may result in spreading of diseases, incorrect standard or quality of PPE, Inadequate handwashing facilities while transporting goods, and generated wastes from imported goods, vaccination and/or treatment activities could be leading to further infection and spreading of diseases. Careful planning and implementing of specific measures for delivery of goods and services has been integrated into the IPC (see Annex IV). There could also be risks of traffic accidents in the transport of goods and this should be managed through training to drivers on safe practices and Codes of Conduct.

87. ***Potential impacts to the health of workers during the project operations.*** Health care of workers, most of whom are women, play a critical role in outbreak response and are the backbone of a country's defenses to limit or contain the spread of disease. They face higher risks of potential COVID-19 infection in their efforts to protect the greater community and are exposed to hazards such as psychological distress, fatigue and stigma. This also includes other hospital staff that may be particular at risk, including ambulance drivers and hospital cleaners. These groups are one of the first on the priority list for vaccination. Activities will include detecting and monitoring of virus, assessing of sample and treating of patients. The key risk is infection with COVID-19 resulting from visiting suspected cases in a quarantine centers, testing in a laboratory, improper manage of infectious waste, taking care of patients can lead to illness and death of those workers and close to them. Careful planning and implementing of specific measures for health care of workers has been suggested and integrated in the IPC (see Annex IV).
88. ***Potential impacts of vaccines procurement and deployment.*** Due to the novelty and relatively shorter timeframe of the development and clinical trials of the COVID-19 vaccine, there could be a lack of uptake in Lao for the vaccine, especially since the rates of childhood vaccination are generally under 80%²² and the country has been mostly shielded from the pandemic, thereby people potentially perceiving a lesser need to vaccinate. Depending on where the vaccine is sourced, there could also be misinformation and mistrust for the vaccine. WB procurement will ensure that the vaccines are deemed safe and approved by 3 Stringent Regulatory Authorities (SRA) in three regions or one with WHO pre-qualification and approval by 1 SRA. The project will support the development of a communications plan and IEC materials in order to inform the public of the vaccination need and strategy and to tackle misinformation. The project will also support consultation activities, outreach to media, and work with NGOs such as Save the Children on social mobilization.
89. There may also be risks in terms of transport of the vaccine and distribution, in particular if the vaccine purchased requires cold temperatures. Drivers, distributors, health staff and vaccination teams, will need to receive quick and efficient training on vaccine distribution and inoculation. Risks associated with unsuitable storage and transportation of vaccines may lead to reduction in vaccine quality. To minimize these risks, GOL has prepared the NDVP which outlines these challenges and describes the logistics of transportation and vaccination, as well as the needed training for health staff, vaccinators, distributors, warehouse staff, etc. The NDVP also includes guidance on training needed for storage and handling and rigorous controls for transportation as well as safe injection practices which will be crucial for vaccine effectiveness as well as to prevent the spread of infection. Vaccine teams, health staff, drivers and health care staff could also be more at risk of contamination if the vials are not handled appropriately.
90. The vaccine administration may also lead to large groups and lack of physical distancing in queues, increasing the risk of exposure of the health workers and relevant government officials, the vaccine receivers, and the community, to COVID-19 transmission. There could also be risks of stigma to people that test positive for the virus.
91. There are risks of contraindications and adverse health effects as a result of improper screening of individuals prior to vaccination, as well as a risk of not completing the

²² Ibid

vaccine dose due to accessibility, people's perceptions or schedule mismanagement. From WHO figures, there is indication that second dose of vaccinations (such as measles) is lower than the first dose. During the immunization period, close monitoring of adverse events in vaccinated individuals using information technology, i.e., digital tracking system should be conducted and a grievance mechanism/information hotline available. As the possibility of adverse effects of the vaccine is a risk, tracking of health effects in vaccinated individuals and follow-up assessments should be conducted. The project will support activities to strengthen the surveillance systems of MOH, including additional training to staff. Guidance on this is also provided in the NDVP. There may be also risks of unintended health consequences and unexpected side effects after vaccination. The Project will also ensure that emergency response measures are in place in the vaccination centers to cope with these health risks and impacts. These include but should not be limited to teams of qualified health workers, medical equipment and supplies and ambulances as deemed necessary particularly in those remote area where the vaccination teams or centers will be established outside hospitals.

92. ***Potential impacts as a result of exclusion of vulnerable or disadvantaged groups.*** These groups, including ethnic (minority) groups, may not be able to access project benefits as readily due to a lack of targeted information, lack of services in their area, discrimination in accessing services, or stigma if they test positive for COVID-19. Vulnerable groups may also face indirect impacts, particularly women, ethnic groups and those with disabilities, if focus is redirected on COVID-19 and they don't get needed support on reproductive health, vaccination for children, ongoing treatments, etc. These groups may also face challenges in accessing the immunization program, due to access, transportation costs and lack of information. The Stakeholder Engagement Plan (SEP) and ESMPs will need to take the needs of these groups in mind and ensure they can adequately access services and benefit from the project, and that information provided to these groups is relevant, understandable and culturally appropriate. Moreover, the project activities – in particular the development of the communications strategy and IEC materials, will need to ensure that they have formats and information that is adequate and reflects the needs of ethnic and vulnerable groups, that materials are able to reach these groups, and that they are available in various formats and languages.
93. According to the NDVP, vaccination of priority groups will be conducted through a combination of fixed vaccination sites and mobile teams for community outreach, which will assist with reaching remote vulnerable groups. Fixed vaccination sites will be established at the central, provincial, district and other eligible hospitals. In addition, two mobile vaccination teams per district will be deployed for community outreach. Mobile teams will be deployed to different places depending on the target population. Target groups for vaccination will be advised by District Health Office where to get the vaccine, either to the fixed sites located in hospitals or to the mobile teams located in specific places and venues.
94. In particular, ethnic groups and remote communities need to have access to concise and easily understandable information about how to i) avoid contracting COVID-19 and good hygiene; ii) COVID-19 symptoms; iii) what to do/what medical facilities to call or visit if experiencing COVID-19 symptoms and iv) immunization schedule including benefits, timing and priority groups. A focus for remote ethnic communities should also be on steps to take when traveling outside of their area, and potential measures for self-isolation for members that have been in areas with documented COVID-19 cases, in order to

protect remote communities. User and audience-friendly IEC materials must be developed with the needs of ethnic groups in mind, to be used during the visit to these communities. Project workers must take extreme cautionary measures while visiting remote and/or ethnic communities as they could risk bringing the virus to very remote areas. Medical attention to ethnic groups must be sensitive to their needs. Further detail is provided in Annex III, Table A3.2: Potential Social Risks and Mitigation.

95. GOL's NDVP takes into account recommendations by the WHO on setting priority groups for vaccination based on needs, and that it is equitable, fair and inclusive, and this should be followed. The communications strategy and the SEP will be key in ensuring a process of stakeholder engagement to understand the needs of various different groups and the barriers – both in the supply of the vaccine and the demand from users – to getting the population of Lao immunized. As with other immunization programs in the country, following the National Immunization Law (Article 15) which stipulates that citizens will be immunized on a voluntary basis, the vaccine will be voluntary but encouraged by the project, MOH and GOL. Vaccine provision will also be free, though people may experience transportation costs in getting to health centers and this will need to be considered when developing the vaccine deployment plan.
96. ***Potential impacts from the health care waste generated during the project operations.*** The Project will support the process that is dealing with the operation of laboratory, quarantine facilities and isolation rooms where potentially to support the generation of medical wastes including the highly infected waste with COVID-19. The medical waste management including transportation and disposal- of is a concern. Infectious and biohazard waste possibly be generated from labs, quarantine facilities, detection and controlling centers, isolation centers and hospitals could include liquid contaminated waste (e.g. blood, other body fluids and contaminated fluid) and infected materials (water used; lab solutions and reagents, syringes, bed sheets etc.) will require special capacity and management technique to handle. Infectious health care wastes generated from vaccination also pose a risk to community health and safety if not handled, transported, treated, and disposed of according to the proper health care waste management practices.
97. An ESMP comprising an ICWMP for the HCF will be developed and implemented to address issues related to infection control and waste management of the HCF during planning and design, construction/renovation, and operations. The Project will continue to promote good practices on Infection Prevention and Control (IPC) and on Healthcare Waste Management Procedures (HCWMP) given its risks to environment and health as well as public sensitivity. The IPC and HCWMP may be prepared and implemented as a standalone measure or be considered as part of the ESMP and/or ICWMP.
98. ***Potential impacts of improved climate resilience and safety.*** The AF proposed to finance construction of 3 new HCFs facilities in Champasak, Attapeu, and Sekong located on existing public land. It is however, noted that due to location of the existing land for Attapeu, the land level may have to be increased. If this is the case, measures to mitigate potential impacts on local flooding, locations and impacts due to sourcing of soil for land filling, and access, particularly for people with disabilities, will be incorporated into the detailed design and local people will be consulted before construction can begin. Training on the risk prevention and mitigation measures related to natural disaster and flooding risks of the Project HCFs as well as those related to local fire will also be

provided. Improved knowledge and awareness of local communities on these risks could help safe life and assets and adverse impacts of vulnerable peoples.

99. **Potential impacts of use of military or security personnel.** No military or security personnel is expected to be use in the Project. At the time of project preparation. The MOH will inform the Bank if security or military personnel would need to be involved in the future, such as for provision of security to Project workers, sites and/or assets, health care facilities, or to administer the vaccination program. If security or military personnel is engaged, the provision under ESS4 of ESCP has to be strictly followed as an acceptable to the World Bank.
100. **Potential risk due to vaccine safety and impacts due to limited capacity and ineffective management of on cold chain and related logistic.** Given that vaccines are sensitive biological products and their potency (ability to adequately protect the vaccinated patient) can diminish when the vaccine is exposed to inappropriate temperatures (once lost, vaccine potency cannot be regained). Having a clear plan and capacity to monitor, investigate and respond to AEFI and AESI as well as to mitigate the risks due to limited cold chain capacity and the risks related to transport, storage, handling, and disposal of vaccines including adequate provision of PPE, equipment, and training of the workforce are critical to ensure effective and safe implementation of the vaccine deployment program. The NDVP identified various plans to mitigate these risks and the remain challenges are to ensure that the agencies and committees/task forces have adequate and resources (staff and budget) to timely implement them. Initial screening of the Project activities suggested that preparation of an ESMP for vaccination deployment program, rehabilitation of WASH facilities, construction and operations of the new HCFs in the three southern provinces, and laboratory operations will be necessary. The ESS screening will also be updated to incorporate additional activities to be implemented with AF support.

5.2 Summary of Mitigation Measures

101. Table 5.1 provides a summary of the mitigation measures to be conducted by MOH to mitigate the potential ESS risk and negative impacts

Project activities	Risk and Impacts	Mitigation Instruments to be Developed
(1) New construction and/or	<ul style="list-style-type: none"> The design of HCFs including laboratory, quarantine, isolation and treatment centers does not meet technical requirements, increasing risk of spreading COVID-19 to those are working and close to attending in healthcare facilities. When possible, it would be preferable to ensure that health facilities take into account universal access so that they can be accessed by persons with disabilities. 	<ul style="list-style-type: none"> MOH²³ will plan and implement all required measures as part of the ICWMP and ensure effective management of

²³ The project implementing entity (PIE) of MOH is the Project Coordination Office (PCO) of the Department of Planning and Cooperation and the technical departments of MOH and related departments at national and provincial levels including hospitals.

renovation of civil works to improve healthcare facilities (HCF) under the Project	<ul style="list-style-type: none"> • Dust, noise and vibration generated from rehabilitation, new construction or minor civil works; Solid waste generated from rehabilitation, new construction or minor civil works; Asbestos containing materials (ACM) generated from renovation or minor civil works; • Safety risks during works, health staff, patients and their relatives, which may be increased in the construction of new centers; Close working and poor living conditions in worker's camps may create conditions for the easy transmission of COVID-19 and the infection of large numbers of people; Worker's camps could create a risk of GBV, SEA and VAC; Employment of workers; Workers do not receive the care needed if infected with COVID-19. • There may be the presence of ethnic groups nearby new HCF in Sekong and Attapeu. 	<p>contractor ²⁴ (see more details in Annexes II, III, IV, V, VI and VII)</p> <ul style="list-style-type: none"> • Contractors will be required to comply with the ESCOP, including Codes of Conduct and the LMP, and any site-specific mitigation as required (see Annexes III, IV, V, VI and VII). • Guidance on ethnic group consultation, 2012 will be followed in this ESMF as well as meaningful consultations based on the SEP in accordance with ESS7: Indigenous People.
	<ul style="list-style-type: none"> • Possible non-compliance with the 2013 labor law and WB ESS2 	<ul style="list-style-type: none"> • MOH will ensure the LMP is included in bidding documents for (Third Party) contractors and that all workers, and managers, sign SCOC (see Annex VI)
(2) Operations of existing and/or new HCFs and other emergency	<ul style="list-style-type: none"> • Increase hazardous waste generated and chemicals in the hospitals and health care centers may pose safety risks to health personnel and workers. • Medical waste generated during the provision of COVID-19 diagnosis, care and treatment services is contaminated with COVID-19 virus; Improper collection, transport, treatment and disposal of infectious waste can become a vector for the spread of the virus, including vaccination waste. 	<ul style="list-style-type: none"> • MOH, especially all hospitals and laboratories, will plan and implement mitigation measures identified as suggested in the

²⁴ To ensure effective mitigation of potential impacts during construction, PCO and the responsible PIEs will also update the generic ECOP and include it in bidding and contract documents (BD/CD) and closely supervise the contractor performance. The ECOP will also address social issues related to workers behavior and community health and safety.

<p>response (ER) services to be implemented under the Project</p>	<ul style="list-style-type: none"> • Poor sanitation and improper management of wastewater related to COVID-19 diagnosis and treatment services transmit diseases to communities and pollute environment. • Improper collection of samples and testing for COVID19, as well as of vaccination vials, and appropriate laboratory biosafety could result in spread of disease to medical workers or laboratory workers, vaccination teams, vaccination distributors/drivers or population during the transport of potentially affected samples and/or vaccine vials. • Weak compliance with the precaution measures for infection prevention and control in isolation and treatment of infected cases spreads COVID-19 infections in healthcare facilities. • Some vulnerable groups (especially the poor, elderly or those with pre-existing medical conditions and religious minority groups), who may be severely affected by COVID-19, lack additional support to access diagnosis and excluded from the quarantine, isolation, treatment services or from vaccination activities. • There is possible social discrimination/stigmatization against some vulnerable groups (the poor, the elderly, those with preexisting conditions, and religious minority groups) in the delivery of identification and diagnosis services. <hr/> <ul style="list-style-type: none"> • Specific social risks and mitigation identified (see Annex III) on Occupational & Community Health and Safety: (1) Health risk of staff/worker during operations. There is a risk that lack of hygiene measures, poor sanitation protocols or non-well set isolation and/or treatment centers in health facilities may expose health care workers and hospital staff, including cleaners, and other patients or hospital visitors, or other workers, to COVID-19, including when transporting, storing or handling the vaccine; (2) Community health and safety: due to inappropriate management (transport of hazardous waste/samples/ vaccines, etc. (3) Labor rights, gender and child labor; (4) Gender-Based Violence (GBV) and/or Violence to Children (VAC), and (5) unintended health consequences after vaccination. <hr/> <ul style="list-style-type: none"> • There is possible social discrimination/stigmatization against some vulnerable groups (the poor, the elderly, those with preexisting conditions, and religious minority groups) in the delivery of identification and diagnosis services or pressure to some groups who may be prioritized for vaccination. 	<p>ESMP, ICWMP, IPC, HCWMP (Annexes III, IV, and VII).</p> <ul style="list-style-type: none"> • When the vulnerable ethnic groups²⁵ are present in the activity/subproject area, this will be managed through the ESMP, ICWMP, IPC, HCWMP (Annexes III, IV) as well as through communication strategies and methods developed in the SEP. • Particular attention will be given to address the mitigation measures identified/suggested in Annexes III and IV. • The Project activities, in particular those specific to the vaccine deployment program, will be designed with risks in mind and the SEP and vaccine communications strategy will guide vaccination outreach activities. • Particular attention will be given to address the mitigation measures
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²⁵ In Lao PDR, the vulnerable ethnic groups are belonging to the Mon-Khmer, Hmong-Iu or Iew Mien and Chino-Tibet ethnic family groups

	<p>Given scarce resources available, some vulnerable groups (the poor, the elderly, those with preexisting conditions, and religious minority groups) may be excluded from the quarantine, isolation, treatment services or from adequately being targeted for vaccination.</p> <ul style="list-style-type: none"> • Additional Social risks identified include (see Annex III): (1) Social stigma; (2) Indirect Impacts to vulnerable groups, such as a lack of health services available as preference is given to COVID-19 response; (3) Impacts to Ethnic Groups and remote communities; (4) Stakeholder Engagement and Grievance Redress; (5) Additional Gender impacts; (6) risks of exclusion from accessing vaccination. 	<p>identified/ suggested in Annexes III and IV and the Labor Management Procedures (Annex V)</p> <ul style="list-style-type: none"> • Particular attention will be given to address the mitigation measures identified in Annexes III and IV as well as measures in the SEP. • Emergency response measures will be in place to handle unexpected health consequences after vaccination.
<p>(3) Procurement of goods, services, and supplies under the Project</p>	<ul style="list-style-type: none"> • Surfaces of imported materials may be contaminated and handling during transportation may result in COVID-19 spreading; Incorrect standard or quality of PPE leads to spread of infection to healthcare workers and cleaners; Inadequate handwashing facilities are provided for handling; Alcohol-based hand rubs may not be as affective at controlling infection as hand washing with soap and water. • A non-transparent and poorly managed distribution system and practice could worsen the current shortage situation, affecting the maximum and efficient use of resources. The disadvantaged and vulnerable population groups, and IP communities could face disproportionate difficulties in accessing the available resources, exposing them to greater risks. 	<ul style="list-style-type: none"> • MOH will plan and implement mitigation measures identified in Annexes III and IV.
<p>(4) TA & Capacity</p>	<ul style="list-style-type: none"> • Information, advice, guidance and training are not updated regularly as more becomes known about how the virus responds to treatment and is 	<ul style="list-style-type: none"> • MOH will plan and implement mitigation

Building under the Project	<p>transmitted and how the vaccine should be delivered and which groups should be prioritized;</p> <ul style="list-style-type: none"> • Provision of support to the disadvantaged vulnerable groups, including vaccination, does not meet the needs of these group, does not reach them, is not well targeted, culturally appropriate, accessible or in a manner that is understandable to disadvantaged or vulnerable groups 	<p>measures identified in Annexes III and IV.</p> <ul style="list-style-type: none"> • The SEP should be a guiding document in terms of communication and outreach strategies and consultations
(5) Procurement and deployment of COVID-19 vaccines and communication activities	<ul style="list-style-type: none"> • There could be a lack of uptake in the vaccination program due to a lack of knowledge, misinformation or mistrust. There is also the potential that people will not come to receive both doses of the vaccine; • Risk of adverse reactions to the vaccines; • Risk of exclusion of vulnerable groups, including that the vaccine deployment plan does not properly identify the most at risk groups or that outreach activities are not well planned and priority groups do not know to access the vaccine, where/how, etc.; • Risk in transport of the vaccine and storage and handling, which could affect the efficacy of the vaccine (for instance if requiring cold temperatures), but also risk of contamination; • Risk of health staff not knowing how to place the vaccine, who the priority groups are or having adequate and accurate information to share with people; • Risk of vaccination waste being mishandled; • Risks to workers who are handling the vaccine, including drivers, warehouse staff, cleaners, vaccination teams and health staff, as well as the community living close to health centers or waste disposal sites; • Lack of physical distancing when vaccination program is going on which could be a risk to the transmission of COVID; • Risk of communication materials not being adapted to the needs and requirements of ethnic and/or other vulnerable and disadvantaged groups. 	<ul style="list-style-type: none"> • The Project will ensure vaccine deployment plan takes these risks into consideration to adequately develop guidelines, training materials, communication materials and identify priority groups, including barriers of accessing the vaccine; • The SEP should be a guiding document in terms of communication and outreach strategies and consultations • MOH will plan and implement mitigation measures identified in Annexes III, IV and V.

Section 6. Procedures to Address Environment and Social Issues

6.1 Scope and Approach

102. This Section provides guidance on procedures to implement the ESMF as well as those related to WB review and clearance of ESS documents. This ESMF procedure comprises

5 steps: (1) ESS screening form and ineligible activities; (2) preparation of ESS instruments and plans including consultation and information disclosure; (3) WB review and clearance of ESS documents (as required); (4) Information disclosure of ESS documents; and (5) Implementation, monitoring and reporting (M&R). The Project will not finance any activity that is considered by the WB as “High” ESS risk especially those expected to cause significant loss or degradation of critical natural habitats; adversely affect forest and forest health or sites with physical cultural resources; and/or create adverse impacts on involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households’ use of land and livelihoods. All site-specific measures described in the ESMP including ICWMP, IPC, HCWMP, ESCOP, LMP, etc., will require WB review and clearance before implementation of the AF activities/subprojects.

6.2 ESMF Procedures

103. Prior to the implementation of AF activities/subprojects, MOH through the leadership of PCO/DPC and assisted by the ESF consultants (ESFC) will conduct an ESS screening process to ensure that AF activities are eligible for AF financing and also prepare an ESS workplan for the activity/subproject identifying how the ESS measures (ESMP, ICWMP, IPC, ESCOP, etc.) will be applied to the AF subprojects/activities and submit them to WB for review and clearance. The AF implementing entity (PIE) and PCO/DPC will be responsible for signing of the ESS screening form (see Annex II) which has been updated in line with the WB template on AF for COVID-19 vaccines procurement and deployment taking into account the need to improve clarity during implementation based on the implementation experience of the parent project. Based on the WB agreement, the ESS workplan and AF activities will be implemented and the implementation progress will be reported to WB periodically.
104. For the activities with moderate and/or substantial risks, especially those related to new construction and/or renovation of HCFs including installation and/or rehabilitation of WASH facilities that may create ESS risks and impacts, measures to mitigate risks and negative impacts during planning and design, construction, and operations of the HCFs will be necessary. Guidance for the preparation of the follow-up ESS instruments such as the ESMP, ICWMP, LMP, and ESCOP are provided in Annexes III, IV, V, and VI, respectively. Annex IV also provide information related to infection prevention and control (IPC) and healthcare waste management procedure (HCWMP) related to COVID19. Consultation with WB specialists are recommended during these processes.
105. The designs for AF activities, especially the construction and/or renovations of civil works will be approved by MOH or related management agencies. During the implementation of construction/renovation works the assigned ESF focal point at the MOH will be responsible for following the compliance of ESCOP. A generic ESCOP (Annex VI) has been developed and it will be finalized and applied to the small construction, rehabilitation of new and/or existing hospitals, laboratories, HCFs, and other existing GOL buildings and public facilities necessary for the quarantine and isolation purposes at both central and local levels. The ESCOP and other site-specific measures required for contractor will then be incorporated into the BD/CD, and the implementing agency will ensure that the contractor is aware and committed to comply with the ESS obligations, including labor requirements and social Codes of Conduct

(SCOC), and SEP as relevant. The implementing agency will also assign the construction supervision consultant or field engineer to be responsible for day-to-day monitoring of the renovation civil works and maintain close consultation with local community as deems necessary. If appropriated, MONRE/PONRE/DONRE and other local authorities and local communities will also monitor the implementation of the ESS measure during implementation of the physical renovation works.

106. Based on the information of the AF activities, GOL policy regarding to COVID-19 response, and the ESS risks and mitigation measures identified in Annexes II and III, the ESMP and/or ICWMP will be updated and adjusted for implementation. Scope of the updated ESMP and/or ICWMP will follow the template provided in Annex IV. All the ESS documents including the updated ESMP and/or ICWMP will be cleared by WB before implementation. Monitoring and reporting to WB will also be required.
107. AF activities relating to vaccination, in particular the vaccine deployment plan and communication strategies, will take into account the risks and mitigation measures outlined in this ESMF in order to incorporate it into the design. The SEP will also be a guiding document in the design of vaccine-related activities (procurement, delivery, training, communications, etc.).

Section 7. Consultation and Disclosure

108. Consultation and information disclosure is part of the stakeholder engagement discussed in more details in Section 8. During November 2020 to March 2021 consultation on the detailed work plan of the parent project were conducted in selected provinces while consultation and disclosure of the draft ESF documents for the AF (ESMF, SEP, and ESCP) were disclosed and consulted with key agencies in Vientiane capacity on 23 March 2021 and the final drafts were disclosed on 12 April 2021. Results from the consultations are provided below while the consultation report is included as an annex to the updated Stakeholder Engagement Plan (SEP) which has been prepared as a standalone document.

7.1 Consultations during AF Preparation.

109. Public consultations were conducted by MOH's Project Coordination Office (PCO) with representatives of the above listed stakeholders on 23 March 2021 to provide an update of activities being financed by this AF and the updated SEP, ESCP, and ESMF. The MOH has a dedicated website and Facebook page where information about the project and project documents are regularly updated. The consultations were to inform stakeholders of the new Project activities as well as to seek their feedback, views and suggestions regarding the project environmental and social risks and suggested mitigation measures, in particular vaccination-related activities. Given ongoing restrictions, consultations were conducted remotely by setting up a WhatsApp group in addition to the Ministry's website where project information was shared and discussed with stakeholders. During consultations, stakeholders expressed their positive view and support for the project as it will play an important role in continuing to manage the spread of COVID-19, protecting community and people's health, minimizing risks associated with the outbreak, and allowing the country to safely open up its borders. Stakeholders also said the project is instrumental to strengthen MOH' capacity to respond to the public

health emergency, contribute to reducing economic impacts and enhance the people's trust in the public health system.

110. For the public health sector and workers, the main concerns raised are centered around management of medical waste which may result in contaminating the environment, spreading the virus and thus increasing risks for community and health workers as well officials working around quarantine's facilities and possible discrimination attitude towards health professionals in the community. Other points of concern relate to limited knowledge among some health professionals on how to use medical equipment, particularly frontline staff working on sample testing in laboratories and ability to understand foreign languages used in instructions for medical equipment and chemicals, as well as their mental health status which needs to be assessed and supported on a regular basis.
111. For the local community and citizens, suggestions from stakeholders were on the need to raise their awareness on spread and impacts of the COVID-19 virus and basic measures to prevent and protect themselves from virus through personal hygiene, social distancing and safeguarding their community. It is also crucial for people's participation in the project through providing their feedback and suggestions, and thus the project should set up a mechanism where their feedback can be received, addressed and reflected in the project design and implementation. To reach out to the local community, health professionals and concerned officials should work in close collaboration with local authorities. One of the effective tools used to disseminate information is loudspeakers and mobile speakers. Special attention should be paid to the vulnerable groups of people who are isolated with limited access to health care services and quarantine facilities which need be provided with resources and services required to meet human basic needs and consumption. The above discussed concerns and suggestions are reflected in the ESMF, ESCP and SEP which will be updated, consulted and disclosed before submission to the World Bank for approval.
112. Specific consultations were conducted with relevant stakeholders where the three new HCFs are expected to be constructed, namely in Champasak, Sekong and Attapeu²⁶ in November 2020. These consultations were aimed at discussing with relevant stakeholders the proposed new HCFs, their location, potential impacts and mitigation measures, such as management of waste water, solid waste, access roads, safeguards measures during construction, etc.
113. The parent project first held consultations with stakeholders during April 23 - May 4, 2020 using the same remote method as for this AF. At that time, only few feedback was received and general comments were positive with the proposed project. The full report on consultations is provided in SEP for both ESCP, SEP, and ESMF consultation.

7.2 Consultation during Implementation of the parent project

²⁶ Consultations were held in Oupalath village, Phonthong district Hospital, Champasak Province; Maihuameung village, Lamam district, Sekong Provincial Hospital, and Vernkhaen village, Samakhixay district, Attapeu Provincial Hospital.

114. During November 2020 to March 2021, sixteen (16) consultation meetings have been conducted in seven provinces with a total number of 385 participants and 174 of them are female participants. These consultations are for both parent Project and AF. The consultation meeting that was conducted at central level in Vientiane capital was chaired by Deputy Director of Department of Planning and Cooperation, and participants are from DPC, DCDC, DHR, FDD, NCLE, CCEH, DoF, DHHP Office. For the consultation at provincial level was chaired by Head of Provincial Health Office (PHO) and participated by relevant health sectors and local communities.
115. The consultation was conducted during November 2020 to March 2021 in the six provinces (Champasak, Sekong, Salavan, Attapeu, Xiengkhouang and Huaphan) as well as in Vientiane Capital (VTE) on 16 March and 23 March 2021. Specifically, the consultation conducted in the provinces aiming to explain the PIEs on the ESF process and obligations during the implementation of the covid-19 response project while those conducted in Champasak, Attapeu, and Sekong also included the new facilities to be constructed in the 3 provinces, associated risks and ESF instruments proposed to be applied. Consultation in VTE in March focusing on additional activities on the AF. In general, the main objectives of these consultation were for:
- To present about Lao PDR Covid-19 Response Project and to disseminate ESF instruments;
 - To obtain knowledge, concerns, comments and recommendations of PIEs, PHO and DHO and local communities on the implementation of the Project activities, especially on the awareness, prevention and response measures to the Covid-19 outbreak;
 - To share working experience with all participants on the implementation of ESS instruments.
116. The detail of consultation findings can be found in Annex 1 Consultation Report of the SEP. The key findings of the consultations are summarized as follows:
- During the consultation, all the participants agreed that this project is a very suitable and useful project as it helps Lao PDR to prepare, prevent, control and response to the Covid-19 outbreak through technical and financial assistances to improve health care infrastructure and to capacity building of public health services in Lao PDR to prevent, control and response to Covid-19 outbreak through community and multi-stakeholders participations at central to local levels in the project preparation, implementation and monitoring.
 - Mitigation measures and tools for environmental management are adequate and appropriate. However, health facilities at each level, protective equipment (Mask, PPE, Gel) is still not enough. Therefore, the Project should sufficiently provide equipment and medical, disinfection, and cleaning supplies for the health officers and workers at each level.
 - One of the outcomes of this consultation is that people expressed concern about the amount of information the public has and the possibility that people do not have sufficient access to information, fear or mistrust in the vaccine, etc. Therefore the project will ensure that communications and information sharing is key and prepare a strong communications program as mentioned in the ESMF and SEP. Another concerns are (i) the use of big budget from loan budget which needs a good planning, management and control of budget allocation; (ii) high environmental

and health risks if the medical or infected medical wastes has not been disposed properly; (iii) the increase in workload and time to medical officers have to work more and longer hours which can affect the relationship with their families or create family mental health.

- Some of highlighted suggestions are (i) use celebrities like Net-Idols to help disseminate messages as well as monks and mention more their potential important role; (ii) more trainings on the use of these instruments are needed to provide to all relevant stakeholders at all levels because they have different knowledge; (iii) the manual on how to properly dispose the waste should be provided as well as trainings on waste segregation; and (iv) media and information should be provided in ethnic languages.

117. It is expected that consultations and information disclosure will be an ongoing process for the Project and that more traditional means of consultation may be allowed once certain restrictions are lifted. This would allow for better reach and targeting of stakeholders, in particular remote ethnic minorities. For vaccine related activities, the SEP will be closely aligned with vaccination communications strategy, and vice versa. Consultation will be periodically conducted for the SEP, and ESCP and ESMF in case of revisions, with project affected/interested stakeholders including ethnic groups, relevant ministries working or having interest in the health sector, relevant CSOs, as needed, using various commonly used means of communication as appropriate and consistent with ongoing restrictions, including using WhatsApp/Facebook, phone calls and, wherever and whenever permitted face-to-face consultations with a certain social distancing practice observed. It is important that stakeholders are consulted to get their feedback and suggestions on the information being disseminated, best ways to reach stakeholders (in particular the vulnerable), etc. The MOH Facebook page will also be a good venue to update information and receive feedback from stakeholders.

Section 8. Stakeholder Engagement

8.1 Stakeholder Engagement Plan (SEP)

118. A Stakeholder Engagement Plan (SEP) has been prepared under the parent project and updated for this Additional Financing. The SEP defines a program for stakeholder engagement, including public information disclosure and consultation, throughout the entire project cycle. It also outlines a communication strategy with the project stakeholders, and offers mechanisms for them to raise concerns, provide feedback, or complaints about the project. While Component 1 of the project, as well as AF activities specific to vaccination, deals with communication materials and reaching out to communities, Stakeholder Engagement deals with all project components as it seeks to ensure stakeholders are consulted and well-informed about the project and have avenues to provide their feedback.

119. The SEP is a living document. The objectives of the SEP are:

- a) To identify all project stakeholders including their priorities and concerns, and ensure the project has ways to incorporate these;
- b) Identify strategies for information sharing and communication to stakeholders in ways that are meaningful and accessible;

- c) To specify procedures and methodologies for stakeholder consultations, documentation of the proceedings and strategies for feedback;
- d) To establish an accessible, culturally appropriate and responsive grievance mechanism, and
- e) To develop a strategy for stakeholder participation in the monitoring of project impacts.

120. In general, there are two kinds of stakeholders, affected and interested stakeholders. The ***Affected stakeholders*** are those who will be likely impacted by the Project positively or negatively. They include individuals or groups whose interests may be affected by the Project and who have the potential to influence the Project outcomes in any way. A guiding principle is that engagement with these stakeholders will be commensurate with the level of impacts they suffer. In line with the SEP, the affected parties include:

- a) Individual, household and communities that are identified as vulnerable to COVID-19, including those individuals, households or communities which may be considered disadvantaged or vulnerable as defined by the project due to social or economic status (elderly people; children, particularly those that are malnourished; those with underlying health conditions e.g. diabetes, cancer, hypertension, coronary heart diseases, and respiratory diseases, among others; persons with disabilities including physical and mental health disabilities; single parent headed households, male and female; poor, economically marginalized, and disadvantaged groups; and ethnic groups);
- b) Priority groups identified for COVID vaccination, namely (i) health care workers, (ii) population over 60 years, (iii) those with underlying health conditions, (iv) essential workers and (v) essential travelers, as well as other priority groups identified once the vaccine is more readily available;
- c) People with COVID-19, their families and communities and those in quarantine if different from this group;
- d) Workers coming back to Lao PDR from neighbouring countries;
- e) Health workers at all levels particularly those on the frontline;

121. ***Interested Stakeholders***. Those who are not impacted by the project but who may be interested in the Project outcomes and who may have an influence in the project. Interested stakeholders are identified as follows:

- a) Workers supporting the renovation and rehabilitation of health care facilities;
- b) Government officials, health officials and communities living near proposed new HCF in Sekong, Attapeu and Champasack, and
- c) Business entities and individual entrepreneurs supporting supplying of key goods and services for prevention of and response to COVID 19:
 - Municipal waste collection and disposal workers;
 - Ministry of Health (MOH) through Public Health Emergency Operation Center (EOC), led by Minister of Health and composed of representatives from concerned departments (including Department of Communicable Disease and Control (DCDC), which will lead the implementation of Component 1: Emergency COVID-19 response, in collaboration with Department of Hygiene and Health Promotion (DHHP), Department of Health Care and Rehabilitation (DHR), and the Cabinet), and Project Coordination Office (PCO), led by the Director General of Department of Planning and Cooperation (DPC) with two deputies: (i) Director General of

- Department of Finance (DOF) and (ii) Deputy Director General of DPC. PCO, who will directly report to the EOC, is responsible for day-to-day management of the project;
- Health workers and physicians from the laboratory, hospitals, provincial and district health offices, community and village cluster (kumban) health centers;
 - Public and local authorities who may be directly working in the project, such as law enforcement officials working on screening or local authorities working on communications and outreach;
 - Those working on vaccination, including National Vaccination Taskforce, incident managers, focal points for logistics and vaccination at the national level, focal points at the provincial level, National Immunization Technical Advisory Group, vaccination teams and Village Health Volunteers (VHV).
- d) Lao population, at household and village level who are interested in understanding the Governments prevention and response to COVID-19 and the vaccination plan, in particular women who tend to be more in charge of vaccination in the family;
- e) People living near borders and in the areas with high population density e.g. Vientiane Capital, and Savannakhet, Luang Prabang, and Champasack Provinces. These groups may be at particular risk from any people with COVID-19 that may be returning from affected countries;
- f) Government officials, permitting and regulatory agencies at the national, regional, and community levels, including environmental, technical, social protection and labour authorities;
- g) Mass organisations (Lao Women’s Union, Lao Youth, Lao Front) and civil society groups, representatives of ethnic groups, and NGOs at the regional, national and local levels that may become partners of the project and supporters of vaccination initiatives;
- h) Business owners and providers of services, goods and materials within the project area that will be involved in the project’s wider supply chain or may be considered for the role of project’s suppliers in the future; and
- i) Mass media and associated interest groups, including local, regional and national printed and broadcasting media, digital/web-based entities, and their associations.

Table 8.1: Implementation of SEP throughout the project cycle

Project stage	Topic of consultation / message	Method used	Target stakeholders	Responsibilities
(1) Preparation prior to effectiveness	The project, its activities and locations, potential impacts and mitigation measures Introduce the project’s ESF instruments Present the SEP and the Grievance Mechanism	Initial National Consultations of the parent project conducted virtually via MOH’s Website and WhatsApp given restrictions on public gatherings, April 13-17, 2020. Updated consultations on this AF conducted on 23 March 2021. Consultations in three provinces	Relevant Ministries, local agencies/CSOs/donors, hospitals working in, or with an interest in health sector and COVID-19. Specific consultations in Champasak, Sekong and Attapeu with relevant	MOH through PCO with support from consultants

Project stage	Topic of consultation / message	Method used	Target stakeholders	Responsibilities
		conducted in November 2020. Outcomes of the consultations will be reflected in the ESMF to be finalized and submitted for clearance. Documents and information updated in MOH website and Facebook page.	stakeholders on new HCFs.	
(2) Project Implementation	Updated project's ESF instruments Feedback of project consultations Information about project's activities in line with the World Health Organization (WHO) COVID19 guidance on risk communication and community engagement and vaccine deployment	Consultations (face to face and/or virtual consultations) Project website and Facebook page Correspondence by phone/email Letters to local, provincial and national authorities Consultations with IPs groups, or their representatives, (when applicable) in a culturally appropriate and accessible manner Outreach activities Coordination with vaccine communications strategy	Affected people and other interested parties as appropriate. Relevant Ministries working in, or with an interest in health sector and COVID-19. CSOs may also be included	MOH through PCO with support from consultants Mass media

122. **Reporting Back to Stakeholders.** Consultations with stakeholders will be the main mechanism to inform them of the project and to get their feedback, as well as updating of project website and Facebook page. PCO will prepare notes of project meetings and consultations with comments and feedback incorporated into project and ESF documents when applicable. Stakeholders who provide specific suggestions will be followed up with after consultations with feedback on how their comments were considered. For instance, an email, message and/or official letter will be sent after workshops (in person or virtual) on how comments/suggestions were considered and appreciated.

123. **Grievance Redress Mechanism.** The Grievance Redress Mechanism (GRM) is required under ESS10 to:

- Provide affected people with avenues for making a complaint or resolving any dispute that may arise during the course of the implementation of the project;
- Ensure that appropriate and mutually acceptable redress actions are identified and

- implemented to the satisfaction of complainants; and
 - Avoid the need to resort to judicial proceedings.
124. Existing grievance systems are in place, with grievances handled at each municipal/provincial referral hospitals and from the village up to national levels through the existing Village Mediation Unit or Committee. At the national level, the Secretariat of the National Task Force for COVID-19 Prevention and Control established serves as a focal point for GRM with its Website: <https://www.covid19.gov.la> and hotline call-in center (#165 and 166) made accessible to the public. In general, the GRM is well functioning. Since the parent project effectiveness in April 7, 2020 until April 30, 2021, about 20,000 of grievances were received and addressed through these channels. The grievances are mostly related to people’s concerns and queries on COVID-19 symptoms, locations and costs of COVID-19 test, government regulations and lockdown measures in force. Some of these are messages and expressions of appreciations and support to the health workers and the government. All grievances received have been addressed and recorded with critical ones responded and clarified by the Task Force during its daily press conference. These same mechanisms continue to be used to deal with vaccine-related complaints under the AF. In addition, 296 fixed site and outreach/mobile delivery teams planned to be established under the AF across the country will serve as focal points for GRM to respond and address grievances and concerns that may be raised by vaccine recipients and local villages. These will include those who may have concerns before vaccination and experience unintended side effects/consequences after vaccination. Where ethnic people and communities are present, ethnic health staff or trained local interpreters will be engaged in the outreach/mobile teams to help in communication with the ethnic beneficiaries and affected people, These mechanisms can be updated as needed to ensure it is being responsive to needs. For instance, during AF project implementation, it will be further assessed whether the current GRM is adequate to deal with vaccine-related concerns, in particular on adverse reactions, or whether a separate system is necessary. Documentation of GRM status needs to be further improved to ensure all critical grievances received and responded are documented in the database and highlighted in the progress reports. The SEP will also be further updated to reflect any changes to ensure methods are culturally appropriate and accessible with regards to ethnic groups and take account customary dispute settlement mechanisms as needed. This will be assessed through consultations with ethnic groups.
125. As mentioned above, grievances are handled at each municipal/provincial referral hospitals and from the village up to national levels through the existing Village Mediation Unit or Committee (VMU/C and fiduciary structures/agencies from district to national level). The dedicated hotline has been established with focal points assigned to National Tasks Force Secretariat. In addition, a focal staff has been appointed from PCO to handle, monitor and report on the status of project related grievances received and addressed. The GRM includes the following steps:
- Step 1: Complainant discusses project-related grievance with the respective central/provincial referral hospitals being supported by the Project or VMU. For instance, a grievance may be related to the upgrading works of the facility, the availability of medical equipment, treatment of patients with COVID-19, performance or conduct of health workers, vaccine schedule, exclusion of Project benefits, etc.
 - Step 2: If the Complainant is not satisfied with how the grievance is handled, or if the grievance is not specific to a hospital, the grievance can be raised directly with

the PCO and/or hotline.

126. The GRM is in place to handle potential cases of SEA/SH and potential issues associated with security personnel and security force if engaged under the project. This follows a survivor-centered approach which is new for Laos. The Lao Women Union (LWU) will be engaged in GRM to assist and facilitate awareness raising and addressing potential grievances on SEA/SH associated with security personnel and security force if involved. LWU is one of the government mass organizations in charge of women advocacy, protection of women's rights and interest as well as gender promotion with its solid presence nationwide from the central to village levels.
127. The above steps are at no cost to the complainant. Once all possible redress has been proposed and if the complainant is still not satisfied then they should be advised of their right to legal recourse.
128. A GRM for health personnel and project workers has been mainly built-on the existing national system and is part of the project's Labor Management Procedures (LMP).
129. The above steps are at no cost to the complainant. Once all possible redress has been proposed and if the complainant is still not satisfied then they should be advised of their right to legal recourse.

Section 9. Institutional Arrangements, Responsibilities and Capacity Building

9.1 ESMF Implementation

130. ***ESMF implementation arrangement*** will be consistent with the Project implementation arrangement presented in Section 2. MOH is responsible for coordination and implementation of the Project and will ensure that Project activities comply with the Project ESCP, SEP, and other specific ESS instruments as described in this ESMF. MOH has assigned specific staff from various departments, to lead and act as focal points on strategic management and technical aspects. This team will also be assigned to be responsible for implementation of the AF regarding the ESMF implementation. The PCO of DPC (assisted by the 2ESFC) will provide supports to the PIE responsible for implementation of Project activities (especially DHHP, DHR, DCDC, FDD, CCEH, NCLE, etc.) including ensuring effective and timely implementation of ESMF activities for all the Project components.
131. ***Monitoring and Reporting (M&R)***. ESMF monitoring, supervision, and reporting is an integral part of the Project implementation and the ESF staff of PCO will also be responsible for these activities. The WB ESF specialists will also supervise and monitor the implementation of ESS activities as part of the WB implementation support mission. Details on M&R responsibility of agencies are described as follows:
 - a) PCO will be responsible for overall M&E of the Project, including those related to M&R on the implementation progress of the ESMF and other ESS activities to

MOH and GOL as well as to the WB. The PCO assisted by the 2ESFC have been working closely with the agencies responsible for implementation of the Project activities to prepare the ESS workplan and the ESS screening of the activity/subproject. Specific forms and submission date can be discussed and agreed between PCO and the implementing agencies.

- b) PCO will prepare and submit a 6-month and an annual ESS monitoring report as identified in the ESCP to the WB. ESS progress monitoring reports may be included as part of the project progress report unless there is an emerging critical issue or incidence, which requires a separate assessment report. The report will provide information on the progress of all ESS plans and measures including the environmental, social, health and safety (ESHS) performance of the Project, stakeholder engagement activities and grievances log. The report will be submitted within 45 days after end of the 6th and 12th month.

132. ***Consultation and information disclosure.*** In line with the SEP prepared for the Project, consultation and information disclosure is considered part of the implementation of commitment in the ESCP and M&R process, as it is a way to reporting back to stakeholder groups. As part of the AF preparation, the drafts ESMF, ESCP and SEP were consulted and disclosed. Results from the consultation process will be used for the SEP update to ensure that the information used in the SEP is most recent, and that the identified methods of engagement remain appropriate and effective in relation to the Project context and specific phases of the development. Consultation and disclosure processes are also part of the ESMF, any feedback will used for further improvement of the ESMF. Any major changes to the Project related activities and to its schedule will be duly reflected in the updated ESCP, SEP and ESMF. Effective consultation and information disclosure will be further discussed and agreed during Project implementation.

133. ***WB Implementation Support.*** To support the challenges during the implementation of this Project where many of the activities will be front loaded and uncertainties regarding the scope, nature and extent of the COVID-19 outbreaks, a group of WBG in-country team on health, operational, fiduciary, and ESF specialists will provide day-to-day implementation support to the MOH with additional support from staff from other WBG offices and technical specialist consultants. WB's implementation support missions will be carried out at least two times per year with a series of meetings (virtual, if necessary) with PCO and/or the implementing agencies as needed. Additional technical supervision mission and advice will be provided by the WB task team upon requested.

134. Table 9.1 below identifies the PIE roles and responsibility for implementation of the ESMF which will be applied to all Project subprojects/activities. The lead PIE for Component 1 will be DCDC and DHHP while that for Component 2 will be DHR and NCLE and they will work closely with other key agencies at national and provinces/districts levels. The PCO will coordinate with provincial Emergency Operation Committee for COVID-19 who will be responsible for overall coordination and support the Provincial Department of Health and District Division of Health (PHO and DHO) on the ESS obligations and Project activities.

Table 9.1: Responsibility of key agencies for ESMF implementation

ESMF Activities	Responsible Entities	Application	Remarks
(1) ESS Screening (Close consultation with WB is encouraged)	The Project Implementing Entity (PIE) in consultation with PCO	All activities	See form in Annex II
(2) Preparation of ESMP, ICWMP including IPC and HCWMP, LMP and complete consultation, disclosure, and securing WB clearance and/or approval of GOL	The PIE assisted by the ESF consultants (to be provided by PCO)	When Project activities/subprojects will involve physical works, goods and services, technical assistance and research related to COVID-19	See guidance in Annexes II, III, IV, V and VI
(3) Finalize the ESCOP and to include them in the bidding and contract document and monitor the compliance	The PIE assisted by the ESF consultants (to be provided by PCO)	If the activity or subproject involve physical civil works	
(4) Implementation of the approved ESS screening and ESS workplans including GRM	The PIE assisted by the ESF consultants (to be provided by PCO)	All activities/subprojects	
(5) Monitoring and reporting	*PCO (ESF staff).	All activities/subprojects	

9.2 Training and Technical Assistance

135. Experience in many countries demonstrates that country capacity to manage the risks associated with COVID-19 are extremely challenged especially when the country and people are not well prepared and/or have limited capacity and resources for identification of infected population, isolation/quarantine, and treatment let alone the fact that available PPE, equipment, and chemicals necessary to ensure disinfection, cleanliness, and high level of hygienic conditions. The Project will support specific training to vaccination teams on inoculation and surveillance of adverse effects, including training to health workers at the central, provincial and district level, and training to warehouse and transport staff. Additionally, the communication process with the public or in handling social concerns around COVID-19 (social stigma) as well as the serious impacts on people income and employment as well as normal tradition and practices can also be very challenging therefore the “learning by doing” approach will have to be adopted during the implementation of the Project.
136. In 2004-2010, GOL had some implementation experience with WB operations related to virus outbreaks and infection prevention and control through the implementation of the Avian and Human Influenza Control and Preparedness Project while MOH has also gained some capacity and experience on infection prevention and control, healthcare waste management, communication and public awareness for emergency situations. At present, MOH is implementing two WB-financing projects (HGNDP and HANSA) and these staff have been assigned by MOH to also be responsible for the implementation of the ESMF for the proposed Project. Nonetheless, given that application of the ESF is relatively new in Lao PDR (compared to the application of safeguard policies) as well as

the urgent need to mitigate potential negative impacts of the Project in light of COVID-19 contagion, it is necessary to provide training and technical assistance as well as necessary equipment as discussed in sections below. MOH capacity to implement ESF was discussed in Section 3.

137. ***Treatment and disposal facilities and equipment.*** Hazardous and infectious waste management in Lao PDR has to be strengthened in terms of availability of safe and reliable treatment and disposal facilities, equipment, knowledge and capacity of staff and workers on good practices especially those related to occupational health and safety (OHS), waste management, and public/community knowledge and awareness on toxic and hazardous waste. At present, there are few cities that have landfills and open dumping areas and most of waste collection is made by private sector while there is one incinerator (capacity 80 kg/day) in Vientiane Capital (KM 32) which is being used to handle hazardous and infectious waste from the hospitals. Review of documents suggested that limited information on waste generation and medical waste management in Lao PDR is limited and there is no wastewater treatment plants that are in operations in Lao PDR. Information shown in Table 4.2 and 4.3 suggested that efforts are being made under the on-going projects being financed by WB while review of MOH regulations regarding to sharps waste management suggested that the infectious waste that are being incinerated are of low temperature and local built types and unlikely to be acceptable for treatment of infectious wastes especially those infected by COVID-19. During the implementation of the Project, follow-up discussion will be made on this aspect to ensure that appropriate and safe options for ensuring management of infectious, sharps, and other medical wastes that are generated from the Project will be properly, safely, and effectively managed. It is likely that WHO is providing technical assistance on development of SOP on waste management related to COVID-19, possible cooperation with WHO and/or UNICEF on this aspect will be pursued during the implementation of the Project.
138. In light of COVID-19 outbreaks and deployment of vaccines, it is expected that amount of infectious and contaminated wastes (used PPEs, gloves, masks, sharp wastes, etc.) will be increased in area that provide vaccination services. It is necessary in the short term to ensure that adequate measures are in place to at least separate and dispose sharps and infectious wastes effectively. The AF has been designed to provide additional support to MOH, PHO, and DHOs to strengthen their capacity to handle these medical wastes using on-site and off-site methods. During the COVID-19 outbreak MOH will consider acquiring a professional local firm to provide waste management services if necessary, to ensure safety of hospital and healthcare staff and workers. The parent project has provided support for procurement of necessary PPE, equipment, and chemicals necessary for the hospitals and HCF especially in the main cities to ensure adequate and safe treatment and disposal of infectious and sharp wastes, and this support will be continued un the AF. At present, MOH has established regulations and guidelines related to solid waste management in 2017, on water supply, sanitation, and hygiene for HCFs in 2018, and on management and disposal of sharp wastes from hospital in October 2019, the Project has been designed to help ensuring effective implementation of these regulations and guidelines by provision of trainings and rehabilitation/retrofitting of treatment and disposal facilities in priority HCFs.
139. Preparation of ESF documents, mitigating, supervising, and monitoring of ESS risks/impacts for the project require a team of experienced expertise and adequate time

to provide implementation support with a good understanding of the cultures and operating processes in Lao PDR. Special emphasis will be given to ensure that hazardous and infectious wastes are separated, treated, and disposed-off properly and safely and that adequate attention is also given to mitigate the social risk especially those related to the (i) monitoring of the participation of ethnic groups, (ii) strengthening of the GRM, and (iii) other feedback loops to solicit feedback and grievances from beneficiaries.

140. During Project implementation, ESS training and TA will be provided to the implementing agencies both at the central and local levels. Key staff of PCO, the implementing agencies, and the provincial health offices will be trained on the concept of ESF and ESSs and the preparation and implementation of the ESMF, ESMP, ICWMP, IPC, HCWMP, SEP, LMP, and ESCOP. At present, PCO/DPC has mobilized 2 ESF consultants (ESFC) and they have been on board. The ESFC will provide ESS support and training related to application of the ESMF including those related to the vaccination and deployment in target areas. The HERP-TF will provide additional TA and capacity building to ensure that the facilities to be implemented under the Project are properly planned, designed, constructed, and operated. The first ESF training workshop will be conducted in mid-2021.
141. Capacity building and training for key agencies on specific issues will be planned and conducted as needed and the following, but not limited to, priorities will be considered:
 - a) The ESMF process and guidelines for preparation, implementation, and supervision of ESF instruments focusing on mitigating ESS risks (ESMP, ICWMP, IPC, HCWMP, and ESCOP when works is involved) and social risks (SEP, LMP, and GRM that could be effective in responding to local complaints);
 - b) Training on the management and disposal of healthcare waste management, particularly focus on infectious and biohazard wastes to health care workers, volunteers, interns, and social workers involved in the Project at all levels;
 - c) Specific training on supervision and monitoring of contractor performance, including forms and reporting process and basic knowledge on health, safety, and good construction practices for reducing potential impacts on local environment and local peoples, SCOC and communication and GRM procedures and other social issues related to HIV/AIDs and other communication diseases, etc.; and
 - d) Development, production, and distribution of the IEC materials on management and disposal of infectious wastes, COVID-19 prevention, vaccination, etc.
 - e) Specific training to vaccination teams on inoculation and surveillance of adverse effect.
142. Local contractors are expected to provide the construction services in the new HCFs to be constructed in Champasak, Sekong, and Attapeu. Given the lack of knowledge and experience on WB requirements regarding measures related to OHS, ESCOP, and other mitigation measures during construction as required under ESHS requirements of the BD/CD, DCO of DPC will provide training to the PIE to be responsible for bidding and supervision/monitoring of contractor performance before bidding. The PIE responsible for bidding is responsible for ensuring that all the bidders aware and acknowledge the ESS obligations as part of the bidding process as well as the construction stage. PCO/DPC and/or the PIE will also work with local agencies during monitoring of contractor performance and submit a report to WB. Table 9.2 identifies specific target groups for training on the ESMF implementation as the following:

Table 9.2 ESF training for the Project

No	Contents	Target Groups for Training
1	ESMF process, implementation, monitoring, and reporting	<ul style="list-style-type: none"> PCO, the implementing agencies, and the provincial and district health offices (PHO/DHO)
2	ESMP, ICWMP, IPC, HCWMP, SEP, LMP preparation and monitoring including contract management and capacity improvement including on finalize ECOP and signing of SCOC requirements). Before bidding, PCO will provide training to the PIE or HCF owners to be responsible for bidding and/or supervision of contractor performance to understand the ESHS requirement in bidding and contract documents (BD/CD).	<ul style="list-style-type: none"> PCO, the implementing agencies, and the provincial and district health offices (PHO/DHO)
3	Environmental and society monitoring skills improvement	<ul style="list-style-type: none"> PCO, the implementing agencies, the provincial and district health offices (PHO/DHO), PONRE, and other local authorities
4	Training on waste management, ESHS, etc.	<ul style="list-style-type: none"> PCO, the implementing agencies, the provincial and district health offices (PHO/DHO), PONRE, and other local authorities
5	Training on ESCOP and training and signing of SCOC compliance and environmental health and occupational safety measures, prevention of communicable diseases, infectious	<ul style="list-style-type: none"> PCO, the implementing agencies, the provincial and district health offices (PHO/DHO), PONRE, and other local authorities, CSC/field engineer, Contractor, and local communities.
6	Training on IEC materials	<ul style="list-style-type: none"> PCO, the implementing agencies, and the provincial and district health offices (PHO/DHO)
7	Training on COVID-19 vaccination and vaccines deployment	<ul style="list-style-type: none"> PCO, the implementing agencies, and the provincial and district health offices (PHO/DHO)

143. The TOR for mobilization of the TA to be implemented under HEPR-TF and/or individual national consultants will be prepared and submit to WB for clearance.

9.3 ESMP Implementation Budget

144. The ESMP implementation budget comprises of (a) cost for revision and/or update of ESS documents (ESMF, ICWMP, ESCOP, SEPs, LMPs) of the activities/subprojects including consultation with local authorities and communities; (b) cost for implementation of the ESMP, ICWMP, IPC, and/or HCWMP; (c) cost for supervision, monitoring, and training workshops on ESS issues, including supervision of works and monitoring of ESMP, ICWMP, ESCOP, SEPs, LMPs (if requested by WB); (d) cost for

hiring of qualified national (individual or firm) consultants to assist PCO and the implementing entities to coordinate and implement the ESMF including training and preparation of reports; and (e) cost for implementation of ESCOP.

145. ***ESMF Implementation Budget.*** The ESMF implementation budget comprises of (a) cost for revision and/or update of ESF documents including consultation with local authorities and communities; (b) cost for implementation of the ESMP, ICWMP, IPC, and/or HCWMP; (c) cost for supervision, monitoring, and training workshops on ESS issues, including supervision of works and monitoring of ESMP, ICWMP, ESCOP, SEPs, LMPs (if requested by WB); (d) cost for hiring of qualified (individual or firm) consultants to assist PCO and the implementing entities to coordinate and implement the ESMF including training and preparation of reports; and (e) cost for implementation of ESCOP which will be included as part of the construction cost.

146. Given that the mitigation measures have been integrated into project activities during project design. Most of the ESMF implementation budget has been integrated into the component costs. Under the parent project, Components 1 and 2, a total budget of about \$1.87 million will be used for procurement of medical equipment, medical supplier, training, and disinfection activities while \$2.25 million is allocated to protect OHS risk and \$0.30 million has been allocated under Component 3 for hiring of ESF consultants (\$0.2 million) and ESF implementation (\$0.1 million). With the AF, additional budget of \$0.24 million has been allocated to mitigate communication risk due to vaccination (Activity 1.7) and \$0.36 million for additional project management and M&E including AEFI surveillance (Component 3). Cost for vaccine deployment (\$6.89 million) will also include safety, vaccine delivery, and post-deployment survey (AEFI) while the HEPR-TF budget (\$2 million) will be used to strengthen health facilities and lifeline infrastructure for health emergency preparedness in Lao PDR.

Section 10: ANNEXES

ANNEX I Abbreviations and Acronyms

ACM	Asbestos containing materials
ADB	Asia Development Bank
AF	Additional Financing
AEFI	Adverse Effect Following Immunization
BD/CD	Bidding and contract document
CDC	Centre for Disease Control and Prevention
COVID 19	Coronavirus Disease 2019
CCEH	National Center for Communication and Education for Health
CSO	Civil Society Organizations
DCDC	Department Communicable Disease and Controlled
DHHP	Department of Hygiene and Health Promotions
DHIS2	District Health Information System version 2
DHO	District Health Office
DHPE	Department of Health Professions and Education
DHR	Department of Health Care and Rehabilitation
DPC	Department of Planning and Corporation
ESCOPE	Environmental and Social Code of Practices
EHS	Environmental, Health and Safety
EOC	Emergency Operating Centre
ERP	Emergency Response Plan
ESCP	Environment and Social Commitment Plan
ESF	Environmental and Social Framework
ESHS	Environmental, Social, Health and Safety
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
FDD	Food and Drug Department
GBV	Gender Based Violence
GOL	Government of Lao People's Democratic Republic (Lao PDR)
GRM	Grievance Redress Mechanism
HC	Health Center
HCF	Health-Care Facility
HCW	Health-Care Waste
HCWMS	Healthcare Waste Management System
HCWMP	Healthcare Waste Management Procedures
ICWMP	Infection Control and Waste Management Plan
IDA	International Development Association
IPC	Infection and Prevention Control
Lao PDR	Lao People's Democratic Republic
LCRP	Lao PDR COVID-19 Response Project
LMP	Labor Management Procedures

LOHC	Law on Health Care
MOH	Ministry of Health
MCHC	Mother and Child Healthcare Centre (MCHC)
MPSC	Medical Product and Supply Center
MPWT	Ministry of Public Works and Transport
NCCDC	National Committee for Communicable Disease Control
NCLE	National Center for Laboratory and Epidemiology
NDVP	National Deployment and Vaccination Plan
NIP	National Immunization Program
NITAG	National Immunization Technical Advisory Group
NRA	National Regulatory Authority
OHS	Occupational Health and Safety
PCO	Project Coordination Office of DPC
PHO	Provincial Health Office
PIE	Project Implementing Entity
PM	Prime Minister
PMU	Project Management Unit
POE	Point of Entry
POM	Project Operation Manual
PPE	Personal Protective Equipment
SCOC	Social Code of Conduct
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SOP	Standard Operating Procedures
SPRP	COVID-19 Strategic Preparedness and Response Program
SRA	Security Risk Assessment
STI	Sexual Transmitted Illness
TA	Technical Assistance
UNICEF	United Nations Children's Fund
VAC	Violence Against Children
VCOMS	Vientiane City Office for Management and Service
WBG	World Bank Group
WHO	World Health Organization
WWTP	Wastewater Treatment Plant

ANNEX II Screening Form for Potential Environmental and Social Issues

1. This form (Section A2.1) is to be used by the Project Implementation Units (PIUs) of the Project Implementing Entity (PIE) and the Project Coordination Office (PCO) established at the Department of Planning and Coordination (DPC) to screen for the potential Environmental and Social Standards (ESSs) risks and impacts of the proposed Project activities to be implemented under the parent project and its additional financing (AF). It will help the PIUs and PCO in identifying the relevant ESS, establishing an appropriate ESS risk rating for the proposed activity (if relevant) and specifying the type of environmental and social assessment required, including specific instruments/plans. Use of this form will allow the PIUs and PCO to form an initial view of the potential risks and impacts of an activity and identify proportioned mitigation measure. ***It is not a substitute for project-specific ESS assessments or specific mitigation plans.*** **The completed ESS screening form (Table A2.1) with signing of the responsible persons, will be kept in the Project file for possible review by WB.**

2. This Annex also provide a note on *Considerations and Tools for ESS Screening and Risk Rating* (Section A2.2) as well as a list of non-eligible activities for Project financing (Section A2.3). **No land acquisition of any type can take place under the project. Activity that requires an ESIA study by GOL is not eligible for WB financing.**

Conclusions:

3. Based on the screening results conducted in Table A2.1, complete the conclusion below and sign.

1. Proposed ESS Risk Ratings (High, Substantial, Moderate or Low). Provide Justifications.

-
-

2. Proposed ESS Instruments:

Remarks.

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3. Eligibility: I confirm that the AF activity/subproject is eligible for Project financing (i.e. not fall in the list identified in Table A2.2).

Sign by Subproject/activity owner:

Position:Date

Sign by PCO of DPC:

Position:Date:.....

Section A2.1 ESS screening form (Table A2.1)

Activity/Subproject Name	
Activity/Subproject Location and Scope of Activities	
Activity/Subproject Proponent	
Estimated Investment	
Start/Completion Date	

Questions	Answer		ESS relevance	Due diligence / Actions	Remarks/ Brief description
	Yes	No			
(1) Does the activity/subproject involve civil works including new construction, expansion, upgrading or rehabilitation of healthcare facilities and/or waste management facilities?			ESS1	If Yes, prepare ESMP, ICWMP, IPC, HCWMP per Annexes III and IV of this ESMF and apply SEP. New construction with land acquisition is not eligible (see Section A2.3 of this ESMF Annex II)	
(2) Does the activity/subproject involve land acquisition and/or restrictions on land use?		No	ESS5	If Yes, not eligible (see Section A2.3 of this ESMF Annex II)	

Questions	Answer		ESS relevance	Due diligence / Actions	Remarks/ Brief description
	Yes	No			
(3) Does the activity/subproject involve involuntary acquisition of private assets for quarantine, isolation or medical treatment purposes?		No	ESS5	If Yes, not eligible (see Section A2.3 of this ESMF Annex II)	
(4) Is the activity/subproject associated with any external waste management facilities such as a sanitary landfill, incinerator, or wastewater treatment plant for healthcare waste disposal?			ESS3	If Yes, prepare ESMP, ICWMP, IPC, HCWMP per Annexes III and IV of this ESMF and apply SEP	
(5) Is there a sound regulatory framework and institutional capacity in place for healthcare facility infection control and healthcare waste management?			ESS1	If No, provide adequate training and capacity building to ensure effective implementation of the ESMP, ICWMP, IPC, HCWMP and application of SEP	If Yes, provide brief description
(6) Does the activity/subproject have an adequate system in place (capacity, processes and management) to address waste?			ESS1, ESS3	If No, provide capacity building, budget, and prepare/implement ESMP, LMP, and SEP	
(7) Does the activity/subproject involve recruitment of workers including direct, contracted, primary supply, and/or community workers?			ESS2	If Yes, apply SEP and prepare LMP per Annex V of this ESMF and ensure workers are trained on and sign the Codes of Conduct.	LMP and SEP can be updated in close consultation with WB

Questions	Answer		ESS relevance	Due diligence / Actions	Remarks/ Brief description
	Yes	No			
(8) Does the activity/subproject have appropriate OHS procedures in place, and an adequate supply of PPE (where necessary)?			ESS2	If No, provide capacity building, budget, and prepare/implement ESMP, LMP, and SEP	
(9) Does the activity/subproject have a GRM in place, to which all workers have access, designed to respond quickly and effectively?			ESS2	If No, establish a GRM, provide capacity building, budget, and prepare/implement ESMP, LMP, and SEP	
(10) Does the activity/subproject involve transboundary transportation (including Potentially infected specimens may be transported from healthcare facilities to testing laboratories, and transboundary) of specimen, samples, infectious and hazardous materials?			ESS3	If Yes, prepare ESMP, ICWMP, IPC, HCWMP per Annexes III and IV of this ESMF and apply SEP	
(11) Does the activity/subproject involve use of security or military personnel during construction and/or operation of healthcare facilities and related activities?			ESS4	If Yes, inform WB, prepare and implement measure specified under ESS4 of ESCP, update and apply SEP, prepare LMP per Annex V of this ESMF, and consult WB	
(12) Is the activity/subproject located within or in the vicinity of any ecologically sensitive areas?			ESS6	If Yes, not eligible (see Section A2.3 of this ESMF Annex II)	

<p>(13) Are there any indigenous groups (ethnic groups who are not of Lao Tai ethno-linguistic family meeting specified ESS7 criteria) present in the activity/subproject area and are they likely to be affected by the proposed activity/subproject negatively or positively?</p>			<p>ESS7</p>	<p>If Yes, apply SEP and measures addressing issues on vulnerable groups per Annex III of this ESMF including provide specific measures to address vulnerable ethnic group in the ESMP, ICWMP, IPC, HCWMP, and/or ESCOP</p>	<p>Where the ethnic group is identified (as a group and a community) meeting all of the four criteria below, conduct a quick social assessment in the activity/subproject area. This will be part of the ICWMP preparation. If ethnic individuals and households are identified among the mainstream/majority Lao tai community, social assessment may not be required, but SEP will be applied to ensure their active engagement in consultation and in the sub-project.</p> <p>Four criteria: (a) Self-identification as members of a distinct indigenous social and cultural group and recognition of this identity by others; and</p> <p>(b) Collective attachment to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation, as well as to the natural resources in these areas; and</p> <p>(c) Customary cultural, economic, social, or political institutions that are distinct or separate from those of the mainstream society or culture; and</p> <p>(d) A distinct language or dialect, often different from the official language or</p>
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Questions	Answer		ESS relevance	Due diligence / Actions	Remarks/ Brief description
	Yes	No			
					languages of the country or region in which they reside.
(14) Is the activity/subproject located within or in the vicinity of any known cultural heritage sites?		No	ESS8	If Yes, not eligible (see Section 2.3 of Annex II of this ESMF. Small the project should follow the Chance Find Procedures provided in Section 1.6 of ECOP in Annex VI (ESCOP)	
(15) Is there potential for present considerable Gender-Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) risk in the activity/subproject area during and after construction or sub-project/activity implementation?			ESS1	If Yes, apply SEP and prepare LMP per Annex V of this ESMF. Small civil works will apply ESCOP per Annex VI of this ESMF. All workers must be trained and signed the Codes of Conduct	
(16) Does the activity/subproject carry risk that disadvantaged and vulnerable groups may have inequitable access to project benefits?			ESS1	If Yes, prepare ESMP and apply SEP	
(17) Is there any territorial dispute between two or more countries in the activity/subproject and its ancillary aspects and related activities?		No	<i>OP7.60 Projects in Disputed Areas</i>	If Yes, consult WB. Governments concerned agree	If No, no follow-up actions

Questions	Answer		ESS relevance	Due diligence / Actions	Remarks/ Brief description
	Yes	No			
(18) Will the activity/subproject and related activities involve the use or potential pollution of, or be located in international waterways ²⁷ ?		No	<i>OP7.50 Projects on International Waterways</i>	If Yes, consult WB Notification (or exceptions)	If No, no follow-up actions

²⁷ International waterways include any river, canal, lake or similar body of water that forms a boundary between, or any river or surface water that flows through two or more states.

Section A2.2 Infection Control: Considerations and Tools to Assist in ESS Screening and Risk Rating

4. In the context of global COVID-19 outbreak, many countries have adopted a containment strategy that includes extensive testing, quarantine, isolation and treatment either in a medical facility or at home.

5. A COVID-19 response project may include the following activities:

- Construction of and/or operational support to medical laboratories, quarantine and isolation centers at multiple locations and in different forms, and infection treatment centers in existing healthcare facilities;
- Procurement and delivery of medical supplies, vaccines, equipment and materials, such as reagents, chemicals, and Personal Protective Equipment (PPEs);
- Mass deployment of a safe and effective vaccine;
- Transportation of potentially infected specimens from healthcare facilities to testing laboratories;
- Construction, expansion or enhancing healthcare waste and wastewater facilities;
- Training of medical workers and volunteers; and
- Community engagement and communication.

1. Screening ESS Risks of Medical laboratories

6. Many COVID-19 projects include capacity building and operational support to existing medical laboratories. It is important that such laboratories have in place procedures relevant to appropriate biosafety practices. WHO advises that non-propagative diagnostic work can be conducted in a Biosafety Level 2 (BSL-2) laboratory, while propagative work should be conducted at a BSL-3 laboratory. Patient specimens should be transported as Category B infectious substance (UN3373), while viral cultures or isolates should be transported as Category A “Infectious substance, affecting humans” (UN2814). The process for assessing the biosafety level of a medical laboratory (including management of the laboratory operations and the transportation of specimens) should consider both biosafety and general safety risks. Occupational Health and Safety (OHS) of workers in the laboratory and potential community exposure to the virus should be considered.

7. The following documents provide further guidance on screening of the ESS risks associated with a medical laboratory. They also provide information for assessing and managing the risks.

- WHO; Prioritized Laboratory Testing Strategy According to 4Cs Transmission Scenarios
- WHO Covid-19 Technical Guidance: Laboratory testing for 2019-nCoV in humans:
- WHO Laboratory Biosafety Manual, 3rd edition
- USCDC, EPA, DOT, et al; Managing Solid Waste Contaminated with a Category A Infectious Substance (August 2019)

2. Screening ESS Risks of Quarantine and Isolation Centers

8. According to WHO:

- **Quarantine** is the restriction of activities of or the separation of persons *who are not ill but who may have been exposed to* an infectious agent or disease, with the objective of monitoring their symptoms and ensuring the early detection of cases
- **Isolation** is the separation of *ill or infected persons* from others to prevent the spread of infection or contamination.

9. Many COVID-19 projects include construction, renovation and equipping of quarantine and isolation centers at Point of Entry (POE), in urban and in remote areas. There may also be circumstances where tents are used for quarantine or isolation. Public or private facilities such as a stadium or hotel may also be acquired for this purpose.

10. In screening for ESS risks associated with quarantine and isolation, the following may be considered:

- contextual risks such as conflicts and presence or influx of refugees;
- construction and decommissioning related risks;
- land or asset acquisition;
- use of security personnel or military forces;
- availability of minimum requirements of food, fuel, water, hygiene;
- whether infection prevention and control, and monitoring of quarantined persons can be carried out effectively;
- whether adequate systems are in place for waste and wastewater management;
- L&FS risk and management;
- wastewater issue and management; and
- provision of accurate information to ill, infected or exposed persons in a simple, accessible and culturally appropriate manner.

11. The following documents provide further guidance regarding quarantine of persons.

- WHO; Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19)
- WHO; Key considerations for repatriation and quarantine of travelers in relation to the outbreak of novel coronavirus 2019-nCoV
- WHO; Preparedness, prevention and control of coronavirus disease (COVID-19) for refugees and migrants in non-camp settings

3. Screening ESS Risks of Treatment Centers and for Deployment of Vaccines

12. WHO has published a manual that provides recommendations, technical guidance, standards and minimum requirements for setting up and operating severe acute respiratory infection (SARI) treatment centers in low- and middle-income countries and limited-resource settings, including the standards needed to repurpose an existing building into a SARI treatment center, and specifically for acute respiratory infections that have the potential for rapid spread and may cause epidemics or pandemics.

- WHO Severe Acute Respiratory Infections Treatment Centre
- WHO Covid-19 Technical Guidance: Infection prevention and control / WASH
- WBG EHS Guidelines for Healthcare Facilities
- WHO: Diagnostics, therapeutics, vaccine readiness, and other health products for COVID-19

4. Screening ESS Risks Relating to Labor and Working Conditions

13. A COVID-19 project may include different types of workers. In addition to regular medical workers and laboratory workers who would normally be classified as direct workers, the project may include contracted workers to carry out construction and community workers (such as community health volunteers) to provide clinical support, contact tracing, and data collection, etc. The size of the workforce engaged could be considerable. Risks for such a workforce will range from occupational health and safety to types of contracts and terms and conditions of employment. Further details relevant to labor and working conditions for COVID-19 projects are discussed in the LMP template for COVID-19.

Section A2.3 List of the Non-Eligible Activities

14. Table A2.2 provides a list of non-eligible activities. PIUs will ensure that WB clearance of all ESS documents will be obtained before the activities begin on the ground. In close consultation with WB, other arrangement can be made depending on the potential risks of the proposed activity/subproject.

Table A2.2: Prohibited Activities for the Project (Non-Eligible Activities)

- Activities that involve land acquisition or resettlement.
- Activities of any type classifiable as “High” risk pursuant to the World Bank's Environment and Social Standard 1 (ESS1) of the Environment and Social Framework (ESF)
- Activities that are considered by the World Bank (a) to have potential to cause significant loss or degradation of critical natural habitats whether directly or indirectly or those that could adversely affect forest and forest health; (b) that could affect sites with archaeological, paleontological, historical, religious, or unique natural values; and (c) that will result in adverse impacts on involuntary taking of land, relocation of households, loss of assets or access to assets that leads to loss of income sources or other means of livelihoods, and interference with households’ use of land and livelihoods.
- Use of goods and equipment as considered by the World Bank on meet the following conditions: (a) lands abandoned due to social tension/conflict, or the ownership of the land is disputed or cannot be ascertained; (b) to demolish or remove assets, unless the ownership of the assets can be ascertained, and the owners are consulted; (c) involving forced labour, child labour, or other harmful or exploitative forms of labour; (d) activities that would affect indigenous peoples, unless due consultation and broad support has been documented and confirmed prior to the commencement of the activities; and/or (e) other paramilitary purposes.
- Procurement and deployment of vaccines that is not acceptable to WB. Forced vaccination will not be allowed.
- Activities that require environmental and social impact (ESIA) study by Government of Lao PDR.

ANNEX III. Environmental and Social Management Plan (ESMP) Template

1. The activity/subproject owner (SO) is required to develop an Environmental and Social Management Plan (ESMP), setting out how the environmental and social risks and impacts will be managed through the project lifecycle. This ESMP template includes several matrices identifying key risks and setting out suggested ESS mitigation measures. The SO can use the matrices to assist in identifying risks and possible mitigations.
2. Scope of the ESMP should also include other key elements relevant to delivery of the project, such as institutional arrangements, plans for capacity building and training plan, and background information. The SO may incorporate relevant sections of the ESMF into the ESMP, with necessary updates.
3. The matrices illustrate the importance of considering lifecycle management of ESS risks, including during the different phases of the project identified in the ESMF: planning and design, construction, operations and decommissioning.
4. The issues and risks identified in the matrix are based on current COVID-19 responses and experience of other Bank financed healthcare sector projects. The SO should review and add to them during the environmental and social assessment of an activity/subproject.
5. The World Bank Group (WBG) Environmental Health and Safety (EHS) Guidelines, WHO technical guidance documents and other Good International Industrial Practices (GIIPs) set out in detail many mitigation measures and good practices, and can be used by the SO to develop the ESMP. Proper stakeholder engagement should be conducted in determining the mitigation measures, including close involvement of medical and healthcare waste management professionals.
6. The Infection Control and Waste Management Plan forms part of the ESMP. The ESMP should identify other specific ESS management tools/instruments, such as the Stakeholder Engagement Plan (SEP), labor management procedures (LMP), and/or Medical Waste Management Plan.
7. This Annex provides general environmental and social risks and mitigation measures related to Project finances activities. Table A3.1 identifies measures to mitigate environmental and social risks and impacts associated with physical construction and/or renovation of small civil works while Table A3.2 identifies measures to mitigate potential environmental and social risks and impacts associated with goods, Table A3.3 identifies measures to mitigate potential environmental and social risks and impacts associated with technical assistance and capacity building, and Table A3.4 identifies measures to mitigate potential environmental and social risk and impacts during the operation of laboratories, isolation and treatment centers.
8. In addition, ESS risks under the project can be addressed through site specific infection control and waste management plan (ICWMP) as per guideline provided in Annex IV including an infection and prevention control (IPC) and guideline on healthcare waste management procedures (HCWMP), Labor Management Procedure (LMP) in Annex V,

and an Environmental Code of Practice (ECOP) for small civil work and Social Code of Conducts (SCOC) including gender-based violence (GBV) and violence against children (VAC) and other social issues in Annex VI.

9. For the subproject/activity involves construction and/or renovation of small civil works, the ESMP will apply Table A3.5, A3.6, A3.7, and A3.8 for issues and mitigations to be conducted during the planning and detailed design, construction, operations, and decommission stages, respectively.
10. Once prepared, the documents mentioned in paragraphs 7, 8, and 9 above will be submitted to WB for review and clearance before implementation of project activities. Monitoring and reporting to WB will also be required.

Table A3.1: Measures to mitigate environmental and social risks and impacts associated with physical construction and renovation of small civil works

Risks and Impacts	Mitigation Measures	Responsibilities
<p>(1) The design of the isolation and treatment centers or of the new HCFs does not meet technical requirements, increasing risk of spreading COVID-19 in health facilities</p>	<ul style="list-style-type: none"> ➤ For patients with possible or confirmed COVID-19, isolation rooms should be provided and used at medical facilities. Isolation rooms should: <ul style="list-style-type: none"> - be single rooms with attached bathrooms (or with a dedicated commode); - ideally be under negative pressure (neutral pressure may be used, but positive pressure rooms should be avoided); - be sited away from busy areas (areas used by many people) or close to vulnerable or high-risk patients, to minimize chances of infection spread; - have dedicated equipment (for example blood pressure machine, peak flow meter and stethoscope), but should avoid excess equipment or soft furnishings; - have signs on doors to control entry to the room, with the door kept closed; - have an ante-room for staff to put on and take off PPE and to wash/decontaminate before and after providing treatment. ➤ An operation manual should be prepared prior to the opening of isolation rooms to describe the working procedures to be taken by healthcare workers to protect themselves and prevent infection escape while providing treatment. The operational procedures should be of a standard to meet National guidelines for IPC in healthcare facilities and guidance from WHO and/or CDC on infection control: <ul style="list-style-type: none"> - WHO interim guidance on <u>Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected</u>; - WHO technical brief <u>water, sanitation, hygiene and waste management for COVID-19</u>; - WHO guidance on <u>infection prevention and control at health care facilities (with a focus on settings with limited resources)</u>; - WHO interim practical manual for <u>improving infection prevention and control at the health facility</u>; - CDC Guidelines for <u>isolation precautions: preventing transmissions of infectious agents in healthcare settings</u>; and CDC <u>guidelines for environmental infection control in healthcare facilities</u>. ➤ Contractors must take extreme precautions when construction/rehabilitating works nearby patients, ensuring workers do not come into contact with patients 	<p>Ministry of Health (PCO and related departments at national and provincial levels including hospital)</p>

<p>(2) Dust, noise and vibration generated from construction, rehabilitation or minor civil works</p>	<ul style="list-style-type: none"> ➤ The contractor(s) is responsible for compliance with relevant national legislation with respect to ambient air quality, noise and vibration ➤ The contractor(s) undertaking works shall ensure that the generation of dust is minimized and implement a dust control plan to maintain a safe working environment and minimize disturbances for patients, staff and surrounding community ➤ The contractor(s) undertaking works shall implement dust suppression measures (e.g. water paths, covering of material stockpiles, etc.) as required. Materials used shall be covered and secured properly during transportation to prevent scattering of soil, sand, materials, or generating dust. Exposed soil and material stockpiles shall be protected against wind erosion ➤ The contractor(s) shall ensure onsite latrine be properly operated and maintained to collect and dispose wastewater from those who do the works ➤ The contractor(s) should not carry out construction activities generating high level of noise during healthcare activities, especially when services are being delivered to patients. 	<p>Contractor(s)</p>
<p>(3) Solid waste generated from construction, rehabilitation or minor civil works</p>	<ul style="list-style-type: none"> ➤ The contractor(s) shall develop and follow a brief site-specific solid waste control procedure (storage, provision of bins, site clean-up, bin clean-out schedule, etc.) before commencement of any financed rehabilitation works; ➤ The contractor(s) shall use litter bins, containers and waste collection facilities at all places during works. ➤ The contractor(s) may store solid waste temporarily on site in a designated place prior to off-site transportation and disposal through a licensed waste collector. Transport management plan in line with WBG good practice should be developed. ➤ The contractor(s) shall dispose of waste at designated place identified and approved by local authority. Open burning or burial of solid waste at the hospital premises shall not be allowed. It is prohibited for the contractor(s) to dispose of any debris or construction material/paint in environmentally sensitive areas (including watercourse). ➤ Recyclable materials such as wooden plates for trench works, steel, scaffolding material, site holding, packaging material, etc. shall be segregated and collected on-site from other waste sources for reuse or recycle (sale). 	<p>Contractor(s)</p>

<p>(4) Asbestos containing materials (ACM) generated from renovation or minor civil works</p>	<ul style="list-style-type: none"> ➤ The asbestos audit will be undertaken as required prior to/at the beginning of refurbishment. ➤ Safe removal of any asbestos-containing materials or other toxic substances shall be performed and disposed of by specially trained workers in line with the WBG guidelines on asbestos management. ➤ If ACM at a given hospital is to be removed or repaired, the MOH will stipulate required removal and repair procedures in the contractor's contract. ➤ Contractors will remove or repair ACM strictly in accordance with their contract. Removal personnel will have proper training prior to removal or repair of ACM. ➤ All asbestos waste and products containing asbestos is to be buried at an appropriate landfill and not to be tampered or broken down to ensure no fibers are airborne. Disposal of waste containing asbestos should be agreed with MOH. ➤ No ACM will be used for renovation works. 	<p>Contractor(s)</p>
<p>(5) Safety risks during works, health staff, patients and their relatives</p>	<ul style="list-style-type: none"> ➤ The contractor(s) shall comply with all national and good practice regulations regarding workers' safety. ➤ The contractor(s) shall prepare and implement a simple action plan to cope with risk and emergency (e.g., fire, earthquake, floods, COVID-19 outbreak) ➤ The contractor(s) shall have or receive minimum required training on occupational safety regulations and use of personal protective equipment as well as worker's Codes of Conduct ➤ The contractor(s) shall provide safety measures as appropriate during works such as installation of fences, fire extinguishers, first aid kits, restricted access zones, warning signs, overhead protection against falling debris, lighting system to protect hospital staff and patients against construction risks. 	<p>Contractor(s)</p>

<p>(6) Employment of workers. Close working and poor living conditions in worker’s camps may create conditions for the easy transmission of COVID-19 and the infection of large numbers of people. Transportation, storage and handling of the vaccine, as well as vaccination campaign, could pose risk of transmission if not carefully handled. Risk from workers to communities on GBV/SEA/SH as well as COVID transmission</p>	<ul style="list-style-type: none"> ➤ Develop contingency plans with arrangements for accommodation, care and treatment for: <ul style="list-style-type: none"> - Workers self-isolating - Workers displaying symptoms - Getting adequate supplies of water, food and supplies ➤ Contingency plans also should consider arrangements for the storage and disposal arrangements for medical waste, which may increase in volume and which can remain infectious for several days (depending upon the material). ➤ Ensure medical facilities are stocked with adequate supplies of medical PPE, as a minimum: <ul style="list-style-type: none"> - Gowns, aprons - Medical masks and some respirators (N95 or FFP2) - Gloves (medical, and heavy duty for cleaners) - Eye protection (goggles or face screens) ➤ Medical staff at the facilities should be trained and be kept up to date on WHO advice and recommendations on the specifics of COVID19 ➤ The medical staff/management should run awareness campaigns and posters on site advising workers: <ul style="list-style-type: none"> - how to avoid disease spread (cough/sneeze in crook of elbow; keep 1m or more away, sneeze/cough in tissue and immediately through tissue away, avoid spitting, observe good hygiene) - the need to regularly wash hands with soap and water – many times per day - to self-isolate if they think they may have come in contact with the virus - to self-isolate if they start to display any symptoms, but alert and seek medical advice ➤ Wash stations should be provided regularly throughout site, with a supply of clean water, liquid soap and paper towels (for hand drying), with a waste bin (for used paper towels) that is regularly emptied. ➤ Wash stations should be provided wherever there is a toilet, canteen/food and drinking water, or sleeping accommodation, at waste stations, at stores and at communal facilities. Where wash stations cannot be provided (for example at remote locations), alcohol-based hand rub should be provided. ➤ Enhanced cleaning arrangements should be put in place, to include regular and deep cleaning using disinfectant of catering facilities/canteens/food/drink facilities, latrines/toilets/showers, communal areas, including door handles, floors and all surfaces that are touched regularly 	<p>Contractor(s)</p>
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	<p>(ensure cleaning staff have adequate PPE when cleaning consultation rooms and facilities used to treat infected patients)</p> <ul style="list-style-type: none"> ➤ Worker accommodation that meets or exceeds <u>IFC/EBRD worker accommodation</u> requirements (e.g. in terms of floor type, proximity/no of workers, no ‘hot bedding’, drinking water, washing, bathroom facilities etc.) will be in good state for keeping clean and hygienic, and for cleaning to minimize spread of infection. ➤ To minimize pressure on PPE resources: WHO advice on the effectiveness and use of PPE by general public should be followed to ensure that the supplies are not exhausted through ineffective use – this is equally important on construction sites. ➤ Other measures (such as working water sprinkling systems at crushers and stock piles, covered wagons, water suppression or surfacing of haul roads etc.) should be used for dust suppression on site before relying upon the use of dust masks (which could unnecessarily reduce the availability of N95/FFP2 masks for use by medical staff performing some duties). ➤ Contractors and MOH should ensure that contracted workers and MOH and other relevant project staff, have medical insurance and/or are able to receive free treatment of Covid-19. ➤ Worker accommodation and sanitation facilities to be separate for male/female as needed. ➤ Training on community interaction and GBV/SEA to be provided for all teams, staff (civil servants and outsources staff/contractors) to ensure the teams respect local communities and their culture and will not involve in misconduct. Signing of Code of Conduct. ➤ Any medical or other hospital staff (including cleaners) experiencing symptoms of COVID-19 or a respiratory illness (fever + cold or cough) must remain at home/isolated and report symptoms immediately to supervisors. Contractors to ensure these workers can still access pay. ➤ Workers to access vaccinations as part of national program on a voluntary basis following the National Immunization Law (Article 15) ➤ Training on community interaction, Codes of Conduct and GBV/SEA to be provided for all workers, including construction, drivers, cleaners, MOH staff and vaccination teams to ensure understanding of safe practices regarding COVID-19 as well as appropriate conduct with communities and signing of Codes of Conduct. ➤ Compliance with the project’s LMP 	
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Table A3.2: Measures to mitigate potential environmental and social risks and impacts associated with goods		
Risks and Impacts	Mitigation Measures	Responsibilities
(1) Surfaces of imported materials may be contaminated and handling during transportation may result in spreading.	<ul style="list-style-type: none"> ➤ Projects should ensure that adequate handwashing facilities with soap (liquid), water and paper towels for hand drying (warm air driers may be an alternative), plus closed waste bin for paper towels are available. Alcohol-based hand rub should be provided where handwashing facilities cannot be accessed easily and regularly. ➤ Also ensure awareness campaigns and reminder signs are regularly posted around site to encourage workers regularly wash hands when handling goods, and that they do not touch their face. The awareness campaigns and signs should be designed different languages and in a manner that is culturally appropriate, and accessible to ethnic minorities groups, vulnerable groups and elderly. ➤ If concerned (for example when dealing with goods that have come from countries with high numbers of infected people) a surface or equipment may be decontaminated using disinfectant. After disinfecting, workers should wash hands with soap and water or use alcohol -based hand rub <ul style="list-style-type: none"> - A label containing information on how materials/medical facilities/equipment should be safely handled should be available on site. 	Ministry of Health (PCO and related departments at national and provincial levels including hospital)
(2) Incorrect standard or quality of PPE leads to spread of infection to healthcare workers and cleaners	<ul style="list-style-type: none"> ➤ The healthcare workers shall be provided with medical personal protective equipment (PPE) includes: Medical mask, Gown, Apron, Eye protection (goggles or face shield), Respirator (N95 or FFP2 standard), Boots/closed work shoes ➤ WHO interim guidance on rational use of PPE for coronavirus disease 2019 provided further details on the types of PPE that are required for different functions. ➤ The project health facilities should establish and apply procedures for use of PPE in line with WHO guidelines and National guidelines for Infection Prevention and Control healthcare facilities Information/instruction on how PPE should be used safely handled should be made available on site. (See Annex V) ➤ Contractors and MOH should ensure that contracted workers and MOH and other relevant project staff, have medical insurance and/or are able to receive free treatment of Covid-19. 	Ministry of Health (PCO and related departments at national and provincial levels including hospital)

<p>(3) Inadequate handwashing facilities are provided for handling.</p>	<ul style="list-style-type: none"> ➤ Project health facilities should ensure that adequate handwashing facilities with soap (liquid), water and paper towels for hand drying (warm air driers may be an alternative), plus closed waste bin for paper towels are available. If water and soap handwashing facilities are not possible, alcohol-based hand rubs may be provided. ➤ The project health facilities should establish and apply procedures for hand hygiene in line with WHO guidelines and National guidelines for Infection Prevention and Control healthcare facilities Sign boards on how to do proper hand wash should be stick at each hand wash stations. 	<p>Ministry of Health (PCO and related departments at national and provincial levels including hospital)</p>
<p>(4) Alcohol-based hand rubs may not be as affective at controlling infection as hand washing with soap and water.</p>	<ul style="list-style-type: none"> ➤ Alcohol-based hand sanitizers are not considered as effective as hand washing with soap and water, and should therefore only be used in locations where full hand washing facilities cannot be provided. Advice should be provided to remind users where full handwashing facilities can be found. ➤ The project health facilities should establish and apply procedures for hand hygiene by alcohol in line with WHO guidelines and National guidelines for Infection Prevention and Control healthcare facilities Sign boards on how to do proper hand wash should be stick at each hand wash stations. 	<p>Ministry of Health (PCO and related departments at national and provincial levels including hospital)</p>
<p>(5) Wastes from vaccination programs or treatment are not properly dealt with and lead to further infection.</p>	<ul style="list-style-type: none"> ➤ The treatment of healthcare wastes produced during the care of COVID-19 patients should be collected safely in designated containers and bags, treated and then safely disposed. ➤ Open burning and incineration of medical wastes can result in emission of dioxins, furans and particulate matter, and result in unacceptable cancer risks under medium (two hours per week) or higher usage. Single-chamber, drum and brick incinerators do not meet the BAT requirements under Stockholm Convention. Small-scale incineration should be viewed as a transitional means of disposal for health-care waste. If small-scale incinerators are the only option available, the best practices possible should be used, to minimize operational impacts on the environment. ➤ Alternative treatments should be designed into longer term projects, such as steam treatment methods. Steam treatment should preferably be on site, although once treated, sterile/non-infectious waste may be shredded and disposed of in suitable waste facilities. ➤ The project health facilities should establish and apply procedures for healthcare waste management in line with WHO guidelines for <u>Safe management of wastes from health-care activities</u> and National guidelines for Infection Prevention and Control healthcare facilities. 	<p>Ministry of Health (PCO and related departments at national and provincial levels including hospital)</p>

<p>(6) A non-transparent and poorly managed distribution system and practice could worsen the current shortage situation, affecting the maximum and efficient use of resources.</p> <p>The disadvantaged and vulnerable population groups, and IP communities could face disproportionate difficulties in accessing the available resources, exposing them to greater risks.</p>	<ul style="list-style-type: none"> ➤ Attention should be given to the distribution system, to ensure effective and efficient use of the goods and services and avoid capturing of the rich, powerful and privileged, particularly at this time of short supply. ➤ Particular attention and efforts should be given to the disadvantaged and vulnerable groups and ethnic IP communities to make sure that they have equal if not better access to these resources. 	<p>Ministry of Health (PCO and related departments at national and provincial levels including hospital)</p>
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Table A3.3: Measures to mitigate potential environmental and social risks and impacts associated with technical assistance and capacity building		
Risks and Impacts	Mitigation Measures	Responsibilities
(1) Information, advice, guidance and training are not updated regularly as more becomes known about how the virus responds to treatment and is transmitted as well as vaccination protocols.	<ul style="list-style-type: none"> ➤ TORs to include specific requirement for regular review of information and guidance, including WHO, CDC and other governmental websites. <ul style="list-style-type: none"> - Refer to WHO, CDC websites and other locations as necessary to remain up to date on causes of spread and treatment of infected patients. 	Ministry of Health (PCO and related departments at national and provincial levels including hospital)
(2) Provision of support to the disadvantaged vulnerable groups is not included in the technical assistance and capacity building program	<ul style="list-style-type: none"> ➤ TORs should require specific actions to be identified to ensure disadvantaged and vulnerable groups have effective identification, diagnosis and treatment, whether in medical facilities or in the community, and how they can best access support and treatment and other related services ➤ Similarly, where IP communities are involved, need to follow ESS7 and IPF policy Para 12 on emergency provision. 	Ministry of Health (PCO and related departments at national and provincial levels including hospital)
<p>(3) Planning and design of measures to screen people for COVID-19 or for vaccination deployment and information materials developed could exclude the most vulnerable, who are also less likely to have access or be active on social media.</p> <p>(4) Restrictions on travel, general movement, etc. have the potential to enhance negative impacts to the vulnerable groups, who may have lower incomes, lose jobs, have childcare duties, and may also be the most vulnerable to contracting COVID-19.</p>	<ul style="list-style-type: none"> ➤ Planning of containment measures and social restrictions need to take into account the livelihood impact it will have for the population, in particular the most vulnerable. MOH and the Lao government may need to develop specific mitigation measures for this, such as social safety nets with cash transfers to specific population groups, ensuring that it does not exclude informal workers, the poor, home-based workers, ethnic groups, etc. May also include food grants, essential basket of goods, child care support for women, etc. ➤ When developing communication materials, it is important to ensure that they are clear and concise, and that they are in a format/language that is understandable to all people, in particular the most vulnerable. This includes ensuring there is access to pictorial materials that can be understandable to ethnic groups, as well as materials for those with disabilities (audio for the blind, for example, or sign language for the deaf). Messages should be clear and concise, focusing on (i) hygiene measures and how to protect against COVID-19 (hand washing, coughing, social distancing), (ii) symptoms of COVID-19, (iii) what to do if suspect have COVID-19, as well as (iv) restrictions if applicable (for instance specific guidelines on social-distancing). There should be a dedicated hotline for people to call for questions and recommendations on what to do if they suspect they may have COVID-19. 	MOH

<p>(5) Communication materials may not reach the most vulnerable.</p> <p>(6) General population may lack of understanding in about how COVID-19 is contracted.</p> <p>(7) Vulnerable groups, in particular women, may have difficulties in accessing clean water, in particular during the dry season.</p>	<ul style="list-style-type: none"> ➤ Different media needs to be used (social media, radio, tv) plus engaging existing formal and informal public health and community-based networks (schools, healthcare service providers at local level, etc.). Social influencers should be utilized, such as religious monks, ethnic group chiefs, celebrities, NGOs, or other people with influence, who can help to disseminate the information messages. ➤ A focus of information materials should be on women, as they tend to be the best venue of communication for children and the elderly in the household. ➤ Communication materials must stress that these normal services are still being provided, and explain measures taken in health centers to avoid COVID-19 risks as there may be apprehension from community members to go to health facilities. ➤ Hand washing messages should be clearly promoted in all provinces/districts. Those with restrictions in accessing water or soap should be assisted by district and/or village chiefs. 	
<p>(8) Ethnic groups may be at heightened risk if they contract COVID-19 due to their remoteness in accessing treatment (though their remoteness may protect them from contracting the virus). They may also face difficulties in accessing the vaccine.</p> <p>Their location may also make the diagnosing and treatment of the virus more difficult.</p> <p>They may also be unable to access reliable information materials, including on vaccination, or in a manner that they understand them, or may have traditional beliefs that are in conflict with medical information.</p>	<ul style="list-style-type: none"> ➤ Communication materials must be developed with the needs of ethnic groups in mind, including making information available in pictorial manner as described in other sections in this Table. It would be important to consult with ethnic groups/organizations when developing these materials. ➤ In particular, ethnic groups and remote communities need to have access to concise information about how to i) avoid contracting COVID-19 and good hygiene; ii) COVID-19 symptoms; iii) what to do/what medical facilities to call or visit if experiencing COVID-19 symptoms; and iv) benefits of the vaccine; v) priority groups for the vaccine and vi) how to access the vaccination program. A focus for ethnic group and remote communities should also be on steps to take when traveling outside of their area, and potential measures for self-isolation for members that have been in areas with documented COVID-19 cases, in order to protect remote communities. ➤ Project workers must take extreme cautionary measures if visiting remote and/or ethnic communities as they could risk bringing the virus to very remote areas. ➤ Medical attention to ethnic groups must be sensitive to their needs. ➤ Vaccination program must take into account the needs of ethnic groups, including access, language and traditional beliefs that may result in supply and demand barriers to vaccination. 	<p>MOH, HCFs and Contractors</p>

<p>(9) Quarantine measures, together with fears over COVID-19, livelihood impacts as a result of any restrictions in movement, social isolation and increased economic pressures and loss of jobs (informal or formal sector) may exacerbate household tensions and lead to an increase in GBV and VAC.</p> <p>(10) School closures would mean children are at home and this could increase risk of VAC and GBV, in particular if family members are stressed, drinking or violent. Young females may be in particular risk.</p> <p>(11) Women are more likely to be informal or self- employed workers than men, and may lose income as a result of containment restrictions to prevent COVID-19.</p> <p>(12) Women may also have increased pressures in the home to look after the elderly and young children, especially if there are school closures.</p> <p>(13) Women who are single heads of households may be under increase strains if they lose jobs.</p>	<ul style="list-style-type: none"> ➤ Communication materials should be focused not only on hand washing and hygiene, but on how to cope with social and mental aspects of the COVID-19 pandemic, including loss of jobs and quarantine measures. For instance, there should be information on how to cope with stress and anxiety, recommendations on how to talk to children, etc. Information materials should provide links to resources/organizations that can provide support. ➤ Engage social influencers, such as religious leaders, who can help communicate accurate messages, including on vaccination benefits. ➤ Stakeholder Engagement Plan (SEP) should ensure consultations with CSOs, women, women’s groups and other stakeholders that can provide recommendations on how to communicate information with vulnerable groups, how to support women, and on topics such as GBV and VAC. ➤ There is a need to ensure that GBV-resolution mechanisms and GBV and other mental health services continue to be well resourced as there may be increased demand for their services ➤ Apply the WHO Code of Ethics, Codes of Conduct and ESS COP attached in this ESMF for all workers in the quarantine/isolation facilities, as well as the provision of gender-sensitive infrastructure, such as segregated toilets and enough light in quarantine and isolation centers. ➤ ESS COP included in the letter of PCO’s staff appointment and contracts (for contracted workers) in line with relevant national laws and legislations and the project’s Labor Management Procedures (LMP), including for those working on contact tracing or any other in contact with local communities. ➤ Training on community interaction and GBV/SEA to be provided for all teams, staff (civil servants and outsources staff/contractors) to ensure the teams respect local communities and their culture and will not involve in misconduct. Signing of Code of Conduct. ➤ Lao government may need to consider ways it can support women during the COVID-19 pandemic, in particular female health workers, ensuring continuity of care for sexual and reproductive health, and potential for additional support to women losing income, in particular if in the informal sector (this could be in the form of cash grants, food support or other support). ➤ Lao government may need to think about measures to support informal workers if they experience significant livelihood losses. While women are a big part of the informal workforce, men must also be considered 	<p>MOH and Contractors</p>
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<p>(14) If stakeholders are not properly consulted, information is not disclosed and people are not informed about their rights, options for grievance redress or project timelines, there could be misunderstandings, conflict, stigma, false rumors or loss of confidence in the community regarding the project.</p>	<ul style="list-style-type: none"> ➤ Ensure consultations on SEP and this ESMF include relevant government agencies, NGOs and other organizations working on health and gender, including GBV, as well as ethnic groups. ➤ Ensure messages relating to COVID-19, including on vaccination, reach all groups of people, in particular the most vulnerable (as defined in this Table). This may include having a multi-faceted approach to consultations and disclosure of information and information sharing, such as by loudspeaker (by district health authorities), Facebook, SMS, You Tube videos, social influencers/religious leaders, etc. ➤ Ensure communication materials not only focus on COVID-19 symptoms and hygiene, but also on coping strategies if there is social isolation, avenues (materials, organizations, hotline) available for mental health, GBV, etc. that may be available. ➤ Also see other recommendations on communications materials and messages outlined in this Table. 	MOH
<p>(15) Risk of fear and/or stigma towards the virus, which may make people hide symptoms, avoid getting tested and even reject hygiene measures or wearing PPE equipment (or masks if recommended)</p> <p>(16) Health workers may suffer stigma, in particular when coming back to their communities, as they may be seen as potential “carriers”</p> <p>(17) Some groups may be particularly vulnerable to stigma, such as IP groups, people coming back from Thailand and foreigners.</p>	<ul style="list-style-type: none"> ➤ When developing communication messages about COVID-19, it is important to have social stigma issues in mind and choose language that does not exacerbate stigma. It is best to not refer to people with the disease as “COVID-19 cases”, “victims” “COVID-19 families” or “the diseased”. It is better to refer as “people who have COVID-19”, “people who are being treated for COVID-19”, or “people who are recovering from COVID-19”. It is important to separate a person from having an identity defined by COVID-19, in order to reduce stigma. This language should be used <u>throughout all communication materials</u>. ➤ Engage social influencers, such as religious leaders, who can help communicate accurate messages and help to reduce social stigma as well as support those who may be stigmatized. ➤ Ensure accurate information about the virus is widely disseminated, and that there is also a focus on people recovered. One way to do this could be through District health officials and/or village chiefs. They could be trained or provided accurate information on the basics of COVID-19 prevention (good hygiene, frequent hand washing, avoid touching face, social isolation measures) and be provided with simple materials in Lao language as well as pictorial. ➤ Communication materials must reinforce the positive contribution of health care workers and steps they are taking to protect themselves against the virus and their use of PPE. 	MOH

<p>(18) Screening of people entering the country, in particular land borders as well as contact tracing, confirmation of cases or enforcement of any community movement restrictions or quarantine/lockdown or social restriction measures, could lead to abuse of power by law enforcement, fear from community members (especially the elderly, ethnic and marginalized groups), a potential for GBV, Sexual Exploitation and Abuse (SEA) and/or VAC.</p>	<p>➤ Law enforcement personnel must adhere to highest professional standards when carrying out their duties.</p>	<p>MOH</p>
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Risks and Impacts	Mitigation Measures	Responsibilities
<p>(1) Improper collection of samples and testing for COVID19, as well as improper transport/storage/handling and delivery of the COVID vaccine and appropriate laboratory biosafety and/or infectious waste could result in spread of disease to medical workers or laboratory workers, other non-medical staff, patients or population during the transport of potentially affected samples.</p>	<ul style="list-style-type: none"> ➤ Collection of samples, transport of samples and testing of the clinical specimens from patients meeting the suspect case definition should be performed in accordance with WHO interim guidance <u>Laboratory testing for coronavirus disease 2019 (COVID-19) in suspected human cases</u>. Tests should be performed in appropriately equipped laboratories (specimen handling for molecular testing requires BSL-2 or equivalent facilities) by staff trained in the relevant technical and safety procedures. ➤ Vaccine distribution, handling, storage and inoculation to be in line with WHO standards ➤ National guidelines on laboratory biosafety should be followed. There is still limited information on the risk posed by COVID-19, but all procedures should be undertaken based on a risk assessment. For more information related to COVID-19 risk assessment, see specific interim guidance document: WHO interim guidance for <u>laboratory biosafety related to 2019-nCoV</u>. ➤ Samples that are potentially infectious materials (PIM) need to be handled and stored as described in WHO document <u>Guidance to minimize risks for facilities collecting, handling or storing materials potentially infectious for polioviruses (PIM Guidance)</u>. <ul style="list-style-type: none"> - For general laboratory biosafety guidelines, see the WHO <u>Laboratory Biosafety Manual, 3rd edition</u>. ➤ Procedures for entry into health care facilities, such as minimizing visitors and visitor hours, taking temperature checks and having separate area (including entry area) for patients presenting with COVID-19 symptoms/ respiratory illness, who should be taken to a different area and given a face mask. All persons visiting hospitals should wash hands before entering and before leaving, and there should be a simple poster/signane (can be A4 paper) in Lao language explaining entry procedures. ➤ Use of Personnel Protection Equipment (PPE) at all times for medical staff and cleaners as needed (particularly facemask, gowns, gloves, eye protection and potentially face shield) when in contact with someone who may have COVID-19/ who is presenting with a respiratory illness, including for those caring directly for patients, cleaners entering patient’s room, or where patient has been treated, and lab technicians handling blood samples. Train staff on how to use the PPE, especially the less educated workers (such as cleaners). Put reminders in hospitals (paper/signane) in Lao language. 	<p>Laboratories and HCFs at the National and provincial level</p>

	<ul style="list-style-type: none"> ➤ General cleaning strategies: (i) proceed from cleaner to dirtier areas to avoid spreading dirt and microorganisms; (ii) proceed from top areas to bottom areas to prevent dirt and microorganisms from dripping or falling down and contaminating already cleaned areas (for example clean mattress first, then clean bed legs); (iii) proceed in a methodical, systematic manner to avoid missing areas (for example, proceed from left to right or clockwise). Provide training to cleaning staff on these procedures, as well as on the use of PPE equipment, and put signage of reminders throughout health centers. ➤ Labor personnel needs to be trained and acquainted with key provisions in Labor Management Plan (LMP), in particular Occupational Health and Safety (OHS) aspects. ➤ Adequate facilities for hand washing available. If hand washing is not possible, appropriate antiseptic hand cleanser and clean cloths / antiseptic towelettes should be provided. Hands should then be washed with soap and running water as soon as practical. Reminders should be placed throughout the health care facility, including pictorial on how to properly hand wash. ➤ Hospitals/health centers will also need to develop procedures and facilities for handling dirty linen and contaminated clothing, and preparing and handling food. Dirty linen and clothing from patients with COVID-19 should be washed separately, ensuring staff doing the washing are also practicing hand washing measures and wearing needed PPE equipment (such as masks, gowns, gloves, eye protection and close shoes). Linen and clothing should be washed in hot water. ➤ Open burning and incineration of medical wastes can result in emission of dioxins, furans and particulate matter, and result in unacceptable cancer risks under medium (two hours per week) or higher usage. ➤ If small-scale incinerators are the only option available, the best practices possible should be used, to minimize operational impacts on the environment. Single-chamber, drum and brick incinerators do not meet the Best Available Techniques (BAT) requirements under Stockholm Convention. Small-scale incineration should be viewed as a transitional means of disposal for health-care waste. ➤ Alternative treatments should be designed into longer term projects, such as steam treatment methods. Steam treatment should preferably be on site, although once treated, sterile/non-infectious waste may be shredded and disposed of in suitable waste facilities. ➤ The project health facilities should establish and apply procedures for healthcare waste management in line with WHO guidelines for <u>Safe management of wastes from health-care activities</u> and National guidelines for Infection Prevention and Control healthcare facilities <i>Healthcare Waste Management Guidelines 2011</i>” and “<i>National Injection Safety Guidelines 2014</i>. 	
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<p>(2) Weak compliance with the precaution measures for infection prevention and control in isolation and treatment of infected cases spreads COVID-19 infections in healthcare facilities.</p>	<ul style="list-style-type: none"> ➤ Special considerations need to be made to vulnerable groups in delivering these services. ➤ Health facilities should establish and apply Standard Precautions including: <ul style="list-style-type: none"> - Hand Hygiene (HH); - Respiratory hygiene/cough etiquette. - Use of personal protective equipment (PPE); - Handling of patient care equipment, and soiled linen; - Environmental cleaning; - Prevention of needle-stick/sharp injuries; - Appropriate Health Care Waste Management; (See Annex V: Standard Precautions) ➤ In addition, health facilities should establish and apply Transmission based precautions (contact, droplet, and airborne precautions) as well as specific procedures for managing patients in isolation room/unit. <ul style="list-style-type: none"> - (See Annex V: transmission-based precautions and specific measures for managing patients in isolation room/unit) 	<p>All HCFs</p>
<p>(3) Hazardous materials used and generated during the provision of COVID-19 diagnosis, care and treatment services or during the vaccination program.</p> <p>(4) Hazardous chemicals in the hospitals and health care centers are limited to small volumes of laboratory reagents, chemicals, solvents, medicinal gases etc.</p>	<ul style="list-style-type: none"> ➤ The hospitals and laboratories should develop a hazardous material management procedure that defines: inventory of hazardous materials in the health care facilities, proper labeling of hazardous materials, safe handling, storage and use of hazardous materials, use of protective equipment procedure for managing spill, exposures and other incidents, procedure for reporting of incidents. ➤ Hazardous materials should be handled in accordance with the accepted practices. Only trained personnel should handle the materials and precautions taken when handling materials by using required protection equipment such as ventilation hoods and personal protective equipment. (See Annex IV and V) ➤ During vaccination, proper use and disposal of safety boxes as well as safe disposal of syringes, vials and PPE according to WHO guidelines 	<p>Laboratories at the National and provincial level</p>

<p>(5) Workers, in particular females (the brunt of the health sector), do not receive the care needed if infected with Covid-19, or fear not getting it and continue to show up to work even with symptoms.</p> <p>(6) Workers may be asked to work overtime to respond to the COVID-19 pandemic. It is important that these personnel are able to access overtime pay as needed. Women may in particular need to be provided with extra support if they are single heads of household and also have child-care duties.</p> <p>(7) Health workers may face mental issues or burnout as result of an outbreak.</p> <p>(8) Minor risk of underage workers working as cleaners in medical facilities or transporting medical supplies or equipment. Labor law prohibits anyone under 18 years to be involved in hazardous work.</p> <p>(9) Risk of GBV/SEA to workers and community</p> <p>(10) Risk of workers facing punitive measures if they refuse vaccination</p>	<ul style="list-style-type: none"> ➤ Contractors and MOH should ensure that contracted workers and MOH and other relevant project staff, have medical insurance and/or are able to receive free treatment of Covid-19. ➤ All workers must be paid for overtime as per Labor Law (December 2013 a Labor Law) ➤ Ensure that the staff with lower qualification or less experienced working in the health sector (e.g., cleaners, part-time workers, etc.), often female workers, also have access to the required Personnel Protection Equipment (PPE) and training to make sure they work in a safe environment. ➤ Most vulnerable workers should be identified, such as female single heads of household, who may need additional support in order for them to do their job (for instance, female nurses who are single heads of household may need additional support if they have to work overtime). Additional support to consider may include cash grants, access to food support or provision of child care services. ➤ Health care workers must be actively supported by their employers and commended for their work, as well as offered psychological, emotional or mental support if possible. This may mean bringing in monks to a hospital for a ceremony, or ensuring health workers have regular breaks and proper food throughout the day. ➤ All workers involved in upgrading facilities, health workers, cleaners, etc., must be reassured that they will continue to get paid if they need to self-isolate if they are showing with COVID-19/respiratory symptoms. These provisions must be made including for contracted staff and are included in the Labor Management Plan (LMP). ➤ Child labor or indentured labor is absolutely prohibited in the project. All medical staff, cleaners, and all others handling equipment, tests, wastes, etc. or involved in the transportation of medical equipment and supplies related to the project must be over 18 years. ➤ Any medical or other hospital staff (including cleaners) experiencing symptoms of COVID-19 or a respiratory illness (fever + cold or cough) must remain at home/isolated and report symptoms immediately to supervisors. ➤ Training on community interaction and GBV/SEA to be provided for all teams, staff (civil servants and outsources staff/contractors) to ensure the teams respect local communities and their culture and will not involve in misconduct. Signing of Code of Conduct. ➤ Workers must have the right to refuse the vaccine if they so choose. 	Contractors and MOH
<p>(11) Social exclusion in particular of the most vulnerable and marginalized groups (elderly people; children, particularly those that are malnourished; those with underlying health conditions e.g.</p>	<ul style="list-style-type: none"> ➤ Communication materials and outreach to people must make clear that all treatment for COVID-19, and the vaccination program, at provincial/referral hospitals is <u>free and accessible for all population</u>. People must also be told about the GRM process to denounce any instance where they are denied medical care or when they are not able to receive the vaccine even if they are in a priority group. 	MOH and all HCFs

<p>diabetes, cancer, hypertension, coronary heart diseases, and respiratory diseases, among others; persons with disabilities including physical and mental health disabilities; single parent headed households, male and female; poor, economically marginalized, and disadvantaged groups; and ethnic groups.)</p>	<ul style="list-style-type: none"> ➤ Stakeholder Engagement Plan (SEP) should ensure consultations with NGOs and other stakeholders that can provide recommendations on how to reach vulnerable groups, as well as how to reach priority groups for the vaccination program. 	
<p>(12) Focus on COVID-19 may redirect staff and resources at health facilities and negatively impact other areas, such as maternal health check-ups, vaccinations for children and treatment of chronic diseases. This may particularly impact women, young children, those with chronic conditions, HIV/AIDS and the elderly, among others. These groups of people, among others, may also be fearful of going to the hospital/health center for fear of contracting the virus. This may cause children to miss out on needed vaccinations, women not seeking support during pregnancy, etc.</p>	<ul style="list-style-type: none"> ➤ Hospitals and other health facilities must ensure they still have adequate staff to deal with ongoing medical needs. While non-urgent cases may be deferred, it is important that childhood vaccinations continue, that women have prenatal and antenatal visits, that sexual and reproductive health services are available and that those with chronic conditions and/or disabilities continue to receive necessary treatments (with adequate measures to separate from patients with COVID-19, as detailed in other sections in this Table). ➤ Communication materials must stress that these normal services are still being provided, and explain measures taken in health centers to avoid COVID-19 risks as there may be apprehension from community members to go to health facilities. 	<p>MOH and all HCFs</p>

<p>(13) There is possible social discrimination/stigmatization against some vulnerable groups (the poor, the elderly, those with preexisting conditions, and religious minority groups) in the delivery of identification and diagnosis services.</p> <p>(14) Health workers (disproportionally female), may face discrimination and harassment when going back to their communities due to people's fear in contracting the virus, frustrations over medical care or misinformation.</p> <p>(15) Given scarce resources available, some vulnerable groups (the poor, the elderly, those with preexisting conditions, and religious minority groups) may be excluded from the quarantine, isolation, treatment services or excluded from accessing the vaccine.</p>	<ul style="list-style-type: none"> ➤ Identification of disadvantaged and vulnerable groups in project areas will be made with a view to provide equitable access to the identification and diagnosis services. Priority groups for vaccination should have access to the vaccine regardless of ethnicity, gender, religion or income status. ➤ Information on how to protect oneself from Covid-19, the symptom of Covid-19 infection, where and how to get tested should be made available and accessible to minority groups, other vulnerable groups and the elderly by using different languages (including sign language and pictorial), and in a manner that is culturally appropriate to their respective groups and specific needs. Also disseminate information related to community health and safety, particularly around social distancing, hand washing, high-risk demographics, self-quarantine, and mandatory quarantine. ➤ Communication materials must reinforce the positive contribution of health care workers and make clear the steps health workers and other staff are taking to protect themselves against the virus and their use of PPE. 	<p>Ministry of Health (PCO and related departments at national and provincial levels including hospital) and Laboratories at the National and provincial level</p>
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Table A3.5 - Environmental and Social Risks and Mitigation Measures during Planning and Designing Stage

Key Activities	Potential ESS Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
(1) Identify the type, location and scale of healthcare facilities (HCF) or facilities to be used for deployment of vaccines.					
(2) Identify the need for new construction, expansion, upgrading and/or rehabilitation					
(3) Identify the needs for ancillary works and associated facilities, such as access roads, construction materials, supplies of water and power, sewage system					
(4) Identify onsite and offsite waste management facilities, and waste transportation routes and service providers	Inadequate facilities and processes for treatment of waste	<ul style="list-style-type: none"> ➤ Estimate potential waste streams, including sharps and vaccine program wastes ➤ Consider the capacity of existing facilities, and plan to increase capacity, if necessary, through construction, expansion etc. ➤ Specify that the design of the facility considers the collection, segregation, transport and treatment of the anticipated volumes and types of healthcare wastes ➤ Require that receptacles for waste should be sized appropriately for the waste volumes generated, and color coded and labeled according to the types of waste to be deposited. Develop appropriate protocols for the collection of waste and transportation to storage/disposal areas in accordance with WHO guidance. Design training for staff in the segregation of wastes at the time of use. 			

(5) Identify needs for transboundary movement of samples, vaccines, specimen, reagent, and hazardous materials					
(6) Identify needs for workforce and type of project workers		<ul style="list-style-type: none"> ➤ Identify numbers and types of workers ➤ Consider accommodation and measures to minimize cross infection ➤ Use the COVID-19 LMP template to identify possible mitigation measures 			
(7) Identify needs for using security personnel during construction and/or operation of HCF					
(8) HCF design – general	<ul style="list-style-type: none"> - Structural safety risk; - Functional layout and engineering control for nosocomial infection 				
(9) HCF design - considerations for differentiated treatment for groups of higher sensitivity or vulnerable (the elderly, those with preexisting conditions, or the very young) and those with disabilities	Some groups may have difficulty accessing health facilities				
(10) Design of facility should reflect specific treatment requirements, including triage, isolation or quarantine		<ul style="list-style-type: none"> ➤ The design, set up and management of will take into account the advice provided by WHO guidance for <u>Severe Acute Respiratory Infections Treatment Center</u>. ➤ Hand washing facilities should be provided at the entrances to health care facilities in line with WHO <u>Recommendations to Member States to Improve Hygiene Practices</u>. 			

		<ul style="list-style-type: none"> ➤ Isolation rooms should be provided and used at medical facilities for patients with possible or confirmed COVID-19. ➤ Isolation rooms should: <ul style="list-style-type: none"> - be single rooms with attached bathrooms (or with a dedicated commode); - ideally be under negative pressure (neutral pressure may be used, but positive pressure rooms should be avoided) - be sited away from busy areas or close to vulnerable or high-risk patients, to minimize chances of infection spread; - have dedicated equipment (for example blood pressure machine, peak flow meter and stethoscope) - have signs on doors to control entry to the room, with the door kept closed; - have an ante-room for staff to put on and take off PPE and to wash/decontaminate before and after providing treatment. 			
(11) Design to consider mortuary arrangements	Insufficient capacity Spread of infection	<ul style="list-style-type: none"> ➤ Include adequate mortuary arrangements in the design ➤ See <u>WHO Infection Prevention and Control for the safe management of a dead body in the context of COVID-19</u> 			
(12) Identify the needs for an effective communication campaign on vaccination, including tailored outreach to different groups (including disadvantaged and vulnerable groups), with different partners					
(13) Assess the capacity of the Borrower to establish	Failure to store and handle vaccines properly can reduce vaccine potency,	<ul style="list-style-type: none"> ➤ Support the Borrower to design and establish or improve vaccine cold chain temperature monitoring plan. 			

effective vaccine cold chain temperature monitoring	resulting in inadequate immune responses in patients and poor protection against disease	<ul style="list-style-type: none"> ➤ See WHO guidance on temperature monitoring²⁸ and CDC Vaccine storage and Handling toolkit²⁹ 			
(14) Assess the capacity of the Borrower to monitor adverse events following immunization (AEFI) in line with WHO guidelines	Insufficient capacity for ensuring immunization safety through detecting, reporting, investigating and responding to AEFI.	<ul style="list-style-type: none"> ➤ Support the Borrower to design and establish or improve surveillance system of AEFI. ➤ See WHO Global manual of surveillance of adverse events following immunization³⁰. 			

²⁸ https://apps.who.int/iris/bitstream/handle/10665/183583/WHO_IVB_15.04_eng.pdf;jsessionid=9F079AFFA760DBD35C08B13930268B01?sequence=1

²⁹ <https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html>

³⁰ https://www.who.int/vaccine_safety/publications/Global_Manual_revised_12102015.pdf?ua=1

Table A3.6 Environmental and Social Risks and Mitigation Measures during Construction Stage

Activities	Potential ESS Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
(1) Clearing of vegetation and trees; Construction activities near ecologically sensitive areas/spots	- Impacts on natural habitats, ecological resources and biodiversity				
(2) General construction activities Foundation excavation; borehole digging	- Impacts on soils and groundwater; - Geological risks				
(3) General construction activities	- Resource efficiency issues, including raw materials, water and energy use; - Materials supply				
(4) General construction activities – general pollution management	- Construction solid waste; - Construction wastewater; - Noise; - Vibration; - Dust; - Air emissions from construction equipment				
(5) General construction activities – hazardous waste management	- Fuel, oils, lubricant				
(6) General construction activities – Labor issues	- Workers coming from infected areas - Co-workers becoming infected - Workers introducing infection into community/general public	<ul style="list-style-type: none"> ➤ Refer to COVID-19 LMP if available. ➤ Consider ways to minimize/control movement in and out of construction areas/site. ➤ If workers are accommodated on site require them to minimize contact with people outside the construction area/site or prohibit them from leaving the area/site for the duration of their contract ➤ Implement procedures to confirm workers are fit for work before they start work, paying special to workers with underlying health issues or who may be otherwise at risk 			

		<ul style="list-style-type: none"> ➤ Check and record temperatures of workers and other people entering the construction area/site or require self-reporting prior to or on entering ➤ Provide daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures. ➤ Require workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor if they have symptoms or are feeling unwell ➤ Prevent a worker from an affected area or who has been in contact with an infected person from entering the construction area/site for 14 days ➤ Preventing a sick worker from entering the construction area/site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days. 			
(7) General construction activities – Occupational Health and Safety (OHS)					
(8) General construction activities – traffic and road safety					
(9) General construction activities – security personnel					
(10) General construction activities – land and asset	Acquisition of land and assets				
(11) General construction activities	GBV/SEA issues				
(12) General construction activities – cultural heritage	Cultural heritage	Chance-finds procedure			
(13) General construction activities – emergency preparedness and response					

(14) Construction activities related to <i>onsite</i> waste management facilities, including temporary storage, incinerator, sewerage system and wastewater treatment works					
(15) Construction activities related to demolition of existing structures or facilities (if needed)					
<i>To be expanded</i>					

Table A3.7 - Environmental and Social Risks and Mitigation Measures during Operational Stage

Activities	Potential ESS Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
(1) General HCF operation – Environment	General wastes, wastewater and air emissions				
(2) General HCF operation – OHS issues	<ul style="list-style-type: none"> - Physical hazards; - Electrical and explosive hazards; - Fire; - Chemical use; - Ergonomic hazard; - Radioactive hazard 				
(3) HCF operation – Labor issue					
(4) HCF operation - considerations for differentiated treatment for groups with different needs (e.g. the elderly, those with preexisting conditions, the very young, people with disabilities)					

(5) HCF operation – cleaning		<ul style="list-style-type: none"> ➤ Provide cleaning staff with adequate cleaning equipment, materials and disinfectant. ➤ Review general cleaning systems, training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas. ➤ Where cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, provide appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, provide best available alternatives. ➤ Train cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely use PPE (where required); in waste control (including for used PPE and cleaning materials). 			
(6) HCF operation - Infection control and waste management plan					
(7) Mass vaccination program involving deployment of vaccines from many facilities (not just HCF), vehicles and locations	Mass vaccination provides a vector for the spread of disease.	<ul style="list-style-type: none"> ➤ Develop infection control and waste management plan for vaccination program to consider the use of non-HCF for deployment 			
(8) Waste minimization, reuse and recycling	Use of incinerators results in emission of dioxins, furans and particulate matter	<ul style="list-style-type: none"> ➤ Where possible avoid the use of incinerators ➤ If small-scale incineration is the only option, this should be done using best practices, and plans should be in place to transition to alternative treatment as soon as practicable (such as steam treatment prior to disposal with sterile/non-infectious shredded waste and disposed of in suitable waste facilities) ➤ Do not use single-chamber, drum and brick incinerators 			

		<ul style="list-style-type: none"> ➤ If small-scale incinerators are used, adopt best practices to minimize operational impacts. 			
(9) Procurement, delivery and set up of equipment for the storage and handling of vaccines and associated medical equipment	Surfaces of imported materials may be contaminated and handling and processing may result in spread of COVID-19.	<ul style="list-style-type: none"> ➤ Technical specifications for procuring equipment should require good hygiene practices in line with WHO technical guidance to be observed when preparing the procured goods. ➤ Check national and WHO technical guidance for latest information regarding transmission of COVID on packaging prior to finalization of working protocols at facilities receiving procured goods and update working methods as necessary. 			
(10) Transport of goods or supplies, including the delivery, storage and handling of vaccine, specimen, samples, reagents, pharmaceuticals and medical supplies	<ul style="list-style-type: none"> ➤ COVID-19 is spread by drivers during the transport and distribution of goods or supplies. ➤ Traffic accidents occur during transportation of goods 	<ul style="list-style-type: none"> ➤ Good hygiene and cleaning protocols should be applied. During the transport, truck drivers should be required to wash hands frequently and /or be provided with hand sanitizer, and taught how to use it. ➤ Measures to minimize impacts during transportation, including hazardous materials can be found in the EHSs. 			
(11) Waste segregation, packaging, color coding and labeling					
(12) Onsite collection and transport					
(13) Waste storage					
(14) Onsite waste treatment and disposal					
(15) Waste transportation to and disposal in offsite treatment and disposal facilities					
(16) Transportation and disposal at offsite waste management facilities					

(17) HCF operation – transboundary movement of vaccine, specimen, samples, reagents, medical equipment, and infectious or hazardous materials					
(18) Operation of acquired assets for holding potential COVID-19 patients					
(19) Emergency events	<ul style="list-style-type: none"> - Spillage; - Occupational exposure to infectious disease; - Exposure to radiation; - Accidental releases of infectious or hazardous substances to the environment; - Medical equipment failure; - Failure of solid waste and wastewater treatment facilities - Fire; - Other emergent events 	<ul style="list-style-type: none"> ➤ Emergency Response Plan 			
(20) Mortuary arrangements	<ul style="list-style-type: none"> - Arrangements are insufficient - Processes are insufficient 	<ul style="list-style-type: none"> ➤ <u>Implement good infection control practices (see WHO Infection Prevention and Control for the safe management of a dead body in the context of COVID-19)</u> ➤ <u>Use mortuaries and body bags, together with appropriate safeguards during funerals (see WHO Practical considerations and recommendations for religious leaders and faith-based communities in the context of COVID-19)</u> 			

(21) Vaccination campaign - considerations for communication and outreach for disadvantaged and vulnerable groups					
(22) Stakeholder engagement – considerations for simple, accurate, accessible and culturally appropriate information dissemination; combating misinformation; responding to grievances					
(23) Targeting of beneficiaries is not done in a fair, equitable and inclusive manner	Lack of transparency about the vaccination program	<ul style="list-style-type: none"> ➤ Outreach/communication tools to make potential beneficiaries aware of the eligibility criteria, principles and methods used for targeting ➤ Ensure project includes a functional Grievance Mechanism 			
	Poorest / most needy households are left out	<ul style="list-style-type: none"> ➤ See above. Clear, transparent and unambiguous eligibility criteria ➤ Use good quality Government data combined with geographical targeting ➤ Use local community structures to identify and select beneficiaries, based on inclusive consultations 			
	Lack of diversity and inclusion in vaccination program, resulting in inadequate benefits for other vulnerable groups	<ul style="list-style-type: none"> ➤ Ensure women participate in the program and, where possible, give preference to women within households as transferees ➤ Work with community representatives/ NGOs so that vulnerable groups such as unaccompanied children, youth, Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) survivors, Indigenous Peoples, 			

		LGBTI communities, refugees, internally displaced peoples etc. are included in project activities and benefits			
	SEA/SH increase in project area (e.g. requests for sexual favors to receive vaccinations)	<ul style="list-style-type: none"> ➤ Consultations to discuss process for identifying vaccination prioritization ➤ Grievance Mechanism (GM) to be established as soon as possible to handle complaints ➤ Provide information to potential beneficiaries on eligibility criteria and GM process via various media (radio, SMS, television, online, posters) ➤ Work with local NGOs to provide social services for affected beneficiaries, as well as assistance to register. 			

Table A3.8 Environmental and Social Risks and Mitigation Measures during Decommissioning

Key Activities	Potential ESS Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
(1) Decommissioning of interim HCF					
(2) Decommissioning of medical equipment					
(3) Regular decommissioning					
<i>To be expanded</i>					

ANNEX IV. Infection Control and Waste Management Plan (ICWMP)

Template

1. This Annex provides technical guidance on the preparation of an Infection Control and Waste Management Plan (ICWMP) in line with the ICWMP Template for COVID-19 suggested by World Bank (WB) (Section A4.1) as well as specific guidance on Infection Prevention and Control (IPC) (Section A4.2) and Healthcare Waste Management Procedures (HCWMP) (Section A4.3) recommended by WHO. This ICWMP template, the IPC, and the HCWMP will be applied in light of the ESS risks and mitigation identified in Annex III when the Project location and activities have been identified and confirmed.

2. The Project Implementing Entity (PIE), which can be hospital, HCF, and any entities that implement Components 1 and 2 of Lao PDR COVID-19 Project, in coordination with Project Coordination Office (PCO) of Department of Planning and Cooperation (DPC) will submit the ICWMP, IPC, and HCWMP to WB for review and clearance before the activities can be conducted on the ground.

A4.1 ICWMP Template.

3. The ICWMP template comprises 5 sections: (1) Description of the targeted HCF, (2) Infection Control and Waste Management; (3) Emergency Preparedness and Response; (4) Institutional Arrangement and Capacity Building; and (5) Monitoring and Reporting as shown in Box A4.1. Brief description of the activity/subproject should include, but not limited to, site/locations, nearby protected areas, nearby local communities, beneficiaries, ethnic groups, etc.). The ICWMP should also take into account the related GOL regulations and/or guidelines, especially those recently established (in 2017, 2018, 2019). Table A4.1 presents a matrix template on issues and mitigations for ICWMP as suggested by WB.

Box A4.1. ICWMP template as suggested by WB

1. Introduction

1.1 Describe the project context and components.

1.2 Describe the targeted healthcare facility (HCF):

- Type: E.g. general hospital, clinics, inpatient/outpatient facility, medical laboratory, quarantine or isolation centers;
- *Special type of HCF in response to COVID-19: E.g. existing assets may be acquired to hold yet-to-confirm cases for medical observation or isolation;*
- Functions and requirement for the level infection control, e.g. biosafety levels;
- Location and associated facilities, including access, water supply, power supply;
- Capacity: beds

1.3 Describe the design requirements of the HCF, which may include specifications for general design and safety, separation of wards, heating, ventilation and air conditioning (HVAC), autoclave, and waste management facilities.

2. Infection Control and Waste Management

2.1 Overview of infection control and waste management in the HCF

- Type, source and volume of healthcare waste (HCW) generated in the HCF, including solid, liquid and air emissions (if significant)
- Classify and quantify the HCW (infectious waste, pathological waste, sharps, liquid and non-hazardous) following WBG Environment, Health and Safety (EHS) Guidelines (EHS Guidelines) for HCF and pertaining to Good International Industry Practices (GIIP).
- Given the infectious nature of the novel coronavirus, some wastes that are traditionally classified as non-hazardous may be considered hazardous. It's likely the volume of waste will increase considerably given the number of admitted patients during COVID-19 outbreak. Special attention should be given to the identification, classification and quantification of the healthcare wastes.
- Describe the healthcare waste management system in the HCF, including material delivery, waste generation, handling, disinfection and sterilization, collection, storage, transport, and disposal and treatment works
- Provide a flow chart of waste streams in the HCF if available
- Describe applicable performance levels and/or standards
- Describe institutional arrangement, roles and responsibilities in the HCF for infection control and waste management

2.2 Management Measures

- *Waste minimization, reuse and recycling:* HCF should consider practices and procedures to minimize waste generation, without sacrificing patient hygiene and safety considerations.
- *Delivery and storage of specimen, samples, reagents, pharmaceuticals and medical supplies:* HCF should adopt practice and procedures to minimize risks associated with delivering, receiving and storage of hazardous medical goods.
- *Waste segregation, packaging, color coding and labeling:* HCF should strictly conduct waste segregation at the point of generation. Internationally adopted method for packaging, color coding and labeling the wastes should be followed.
- *Onsite collection and transport:* HCF should adopt practices and procedures to timely remove properly packaged and labelled wastes using designated trolleys/carts and routes. Disinfection of pertaining tools and spaces should be routinely conducted. Hygiene and safety of involved supporting medical workers such as cleaners should be ensured.
- *Waste storage:* A HCF should have multiple waste storage areas designed for different types of wastes. Their functions and sizes are determined at design stage. Proper maintenance and disinfection of the storage areas should be carried out. Existing reports suggest that during the COVID-19 outbreak, infectious wastes should be removed from HCF's storage area for disposal within 24 hours.
- *Onsite waste treatment and disposal (e.g. an incinerator):* Many HCFs have their own waste incineration facilities installed onsite. Due diligence of an existing incinerator should be conducted to examine its technical adequacy, process capacity, performance record, and operator's capacity. In case any gaps are discovered, corrective measures should be recommended. For new HCF financed by the project, waste disposal facilities should be integrated into the overall design and ESIA developed. Good design, operational practices and internationally adopted emission standards for healthcare waste incinerators can be found in pertaining EHS Guidelines and GIIP.
- *Transportation and disposal at offsite waste management facilities:* Not all HCF has adequate or well-performed incinerator onsite. Not all healthcare wastes are suitable for incineration. An

onsite incinerator produces residuals after incineration. Hence offsite waste disposal facilities provided by local government or the private sector are probably needed. These offsite waste management facilities may include incinerators, hazardous wastes landfill. In the same vein, due diligence of such external waste management facilities should be conducted to examine its technical adequacy, process capacity, performance record, and operator's capacity. In case any gaps are discovered, corrective measures should be recommended and agreed with the government or the private sector operators.

- *Wastewater treatment:* HCF wastewater is related to hazardous waste management practices. Proper waste segregation and handling as discussed above should be conducted to minimize entry of solid waste into the wastewater stream. In case wastewater is discharged into municipal sewer sewerage system, the HCF should ensure that wastewater effluent comply with all applicable permits and standards, and the municipal wastewater treatment plant (WWTP) is capable of handling the type of effluent discharged. In cases where municipal sewage system is not in place, HCF should build and properly operate onsite primary and secondary wastewater treatment works, including disinfection. Residuals of the onsite wastewater treatment works, such as sludge, should be properly disposed of as well. There're also cases where HCF wastewater is transported by trucks to a municipal wastewater treatment plant for treatment. Requirements on safe transportation, due diligence of WWTP in terms of its capacity and performance should be conducted.

3. Emergency Preparedness and Response

Emergency incidents occurring in a HCF may include spillage, occupational exposure to infectious materials or radiation, accidental releases of infectious or hazardous substances to the environment, medical equipment failure, failure of solid waste and wastewater treatment facilities, and fire. These emergency events are likely to seriously affect medical workers, communities, the HCF's operation and the environment.

Thus, an Emergency Response Plan (ERP) that is commensurate with the risk levels is recommended to be developed. The key elements of an ERP are defined in ESS 4 Community Health and Safety (para. 21).

4. Institutional Arrangement and Capacity Building

A clearly defined institutional arrangement, roles and responsibilities should be included. A training plan with recurring training programs should be developed. The following aspects are recommended:

- Define roles and responsibilities along each link of the chain along the cradle-to-crave infection control and waste management process;
- Ensure adequate and qualified staff are in place, including those in charge of infection control and biosafety and waste management facility operation.
- Stress the chief of a HCF takes overall responsibility for infection control and waste management;
- Involve all relevant departments in a HCF, and build an intra-departmental team to manage, coordinate and regularly review issues and performance;
- Establish an information management system to track and record the waste streams in HCF; and
- Capacity building and training should involve medical workers, waste management workers and cleaners. Third-party waste management service providers should be provided with relevant training as well.

5. Monitoring and Reporting

Many HCFs in developing countries face the challenge of inadequate monitoring and records of healthcare waste streams. HCF should establish an information management system to track and

record the waste streams from the point of generation, segregation, packaging, temporary storage, transport carts/vehicles, to treatment facilities. The HCF is encouraged to develop an IT based information management system should their technical and financial capacity allow.

As discussed above, the HCF chief takes overall responsibility, leads an intra-departmental team and regularly reviews issues and performance of the infection control and waste management practices in the HCF. Internal reporting and filing systems should be in place.

Externally, reporting should be conducted per government and World Bank requirements.

Table A4.1 ICWMP template

Activities	Potential ESS Issues and Risks	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
(1) General HCF operation – Environment	General wastes, wastewater and air emissions				
(2) General HCF operation – OHS issues	<ul style="list-style-type: none"> - Physical hazards; - Electrical and explosive hazards; - Fire; - Chemical use; - Ergonomic hazard; - Radioactive hazard. 				
(3) HCF operation - Infection control and waste management plan					
(4) Waste minimization, reuse and recycling					
(5) Delivery and storage of specimen, samples, reagents, pharmaceuticals and medical supplies					
(6) Storage and handling of specimen, samples, reagents, and infectious materials					
(7) Waste segregation, packaging, color coding and labeling					
(8) Onsite collection and transport					
(9) Waste storage					
(10) Onsite waste treatment and disposal					
(11) Waste transportation to and disposal in offsite treatment and disposal facilities					
(12) HCF operation – transboundary movement of specimen, samples, reagents, medical equipment, and infectious materials					

<p>(13) Emergency events</p>	<ul style="list-style-type: none"> - Spillage; - Occupational exposure to infectious; - Exposure to radiation; - Accidental releases of infectious or hazardous substances to the environment; - Medical equipment failure; - Failure of solid waste and wastewater treatment facilities; - Fire; - Other emergent events 	<p>Emergency response plan</p>			
<p>(14) Operation of acquired assets for holding potential COVID-19 patients</p>					
<p><i>To be expanded</i></p>					

A4.2 Infection Prevention and Control (IPC)

4. This section provides technical guidance on (i) Hand hygiene procedure, (ii) Respiratory hygiene, (iii) Personal protective equipment procedures, (iv) Patient-care equipment cleaning and disinfection procedures, (v) Soiled linen management procedures, (vi) Environmental cleaning procedure, (vii) Prevention of needle-stick/sharp injuries, (viii) Contact precautions, (ix) Droplet precautions, (x) Air-borne precautions, and (xi) Specific procedures for managing patients in isolation unit. Section A4.3 provide procedures on healthcare waste management procedures.

A4.2.1 Hand hygiene procedure

5. HCFs staff and care givers should perform hand hygiene, when arriving at work/HCFs and before leaving work/HCFs, as well as before eating and after using the toilet/ latrine. Additionally, for anyone who is providing care to patients, the “Five moments for hand hygiene” must be respected.



Recommendation

Routine Hand Hygiene

Hand hygiene must be performed before and after every episode of patient contact.

- Before touching a patient
- Before a procedure
- After a procedure or body substance exposure risk
- After touching a patient
- After touching patient’s surroundings

Note: Hand hygiene MUST also be performed after taking off PPE.

1a – Hand Washing with Soap and Water



1b - Hand Hygiene with Alcohol-based Hand Rub (AHR)

Hand washing with Alcohol-based Hand Rub

Duration:
20-30 seconds

- 1 Apply AHR on palms
- 2 Rub palms to palms
- 3 Rub the back of both hands interlacing the fingers
- 4 Rub palm to palm interlacing the fingers
- 5 Rub the backs of fingers by interlocking the hands
- 6 Rub the thumbs
- 7 Rub palms with fingertips

Once dried, your hands are safe

A4.2.2 Respiratory hygiene

6. Respiratory hygiene and cough etiquette is a standard precaution that should be applied by all patients, visitors and HCWs to contain respiratory secretions (e.g. when coughing, sneezing...) to avoid spreading respiratory infections.



Cover nose and mouth when coughing, sneezing with tissue or mask.

If no tissues are available, cough or sneeze into the inner elbow rather than hand.

Do not "spit" in environment (use tissue instead).

Dispose used tissue and/or masks in the nearest bin after use.



Avoid shaking hands when sick. Use «traditional greeting» instead.

Perform hand hygiene after contact with respiratory secretions.



7. HCF should promote respiratory hygiene and cough etiquette by:

- Educating HCF staff, patients, family members, and visitors on the importance of containing respiratory droplet/ aerosol and secretions to prevent the transmission of infectious disease (e.g. influenza, tuberculosis, bacterial pneumonia ...).
- Posting signs informing that patients and family members with acute febrile respiratory illness use respiratory hygiene/cough etiquette (e.g. poster).
- Prepare equipment in triage area for patient and family to apply respiratory hygiene. For instance, in Out-Patient- Department (OPD) and Emergency Room (ER), make mask, tissue, rubbish bin, and AHR ava

A4.2.3 Personal protective equipment procedures

8. These procedures will be applied to all healthcare workers

HCWs must select the appropriate PPE after having assessed the risk of contact with body fluid.

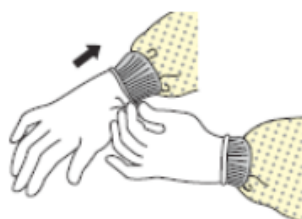
The following is not a sequence of PPE. It is procedure for each PPE item.

It is when the HCW remove the PPE that he/she may contaminate himself/ herself. Therefore wear PPE in a logical order, to be able to take off from the most contaminated item (higher risk) to the less contaminated item (lower risk).

Any PPE procedure must start by performing hand hygiene first.
When removing PPE, the last step is to thoroughly perform hand hygiene.

1. Gloves

Put On



Putting on gloves

Put On

1. Carefully put on disposable gloves (to avoid breaking the gloves)

When wearing long sleeves gown, gloves cover the wrist of the gown

Take Off



Removing gloves

Take Off

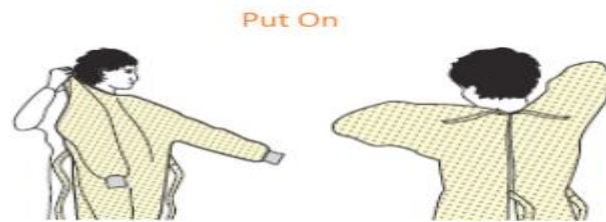
! Outside part of gloves is con-taminated!

1. Grasp outside of glove with opposite gloved hand; peel off
2. Hold removed glove in gloved hand or discharge in waste container
3. Slide fingers of un-gloved hand under remaining glove at wrist
4. Peel glove off
5. Discard gloves in waste container

2. Gown

Put On

1. Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
2. Fasten in back of neck and waist



Take Off

1. Unfasten ties
2. Gown front and sleeves are contaminated!
3. Pull away from neck and shoulders, touching inside of gown (only if not wearing gloves)
4. Turn gown inside out
5. Fold or roll into a bundle and discard



Note: Reusable gown should be clean/ disinfected before being reuse

3. Surgical Mask

Put On

1. Secure ties or elastic bands at middle of head and neck
2. Fit flexible band to nose bridge
3. Fit snug to face and below chin



Put On



Take Off



Take Off


! DO NOT TOUCH with hands the front of mask, it is contaminated!

1. Grasp ties or elastics and take off
2. Discard in waste container

4. Eyes protection (safety glasses, goggles or face shield)


4.1 Procedure for goggle or face shield

Put On



Goggle

Put On




face shield


Put On

Place goggle or face-shield over eyes and face, and adjust to fit

Take Off




Take Off




! DO NOT TOUCH, with hands front of the eyes protection, it is contaminated!

1. Take off, by handling the head band, elastics
2. Place in designated receptacle for reprocessing or in waste container for single use (e.g. face shield).



4.2 Procedure for safety glasses

Put On



Put On

Place item over face and eyes and adjust to fit


Take Off

! DO NOT TOUCH with hands front of the eyes protection, it is contaminated!

To take off, handle by ear pieces

Place in designated receptacle for reprocessing or in waste container for single use (e.g. face shield).

Take Off



A4.2.4 Patient-care equipment cleaning and disinfection procedures

9. All medical devices are either single-use or reusable ones. Single-use equipment must be discarded, while all reusable equipment must be properly processed between use and between patients, to prevent infections. For proper reprocessing of equipment, all items need to be cleaned with detergent (liquid soap) and water before disinfection and sterilization, to get rid of the organic matter e.g. blood and mucus that may neutralize chemical disinfectant and affecting the efficiency of the disinfectant.

10. Instruments and other items may be classified based on the risk of transmitting infection into critical, semi-critical or non-critical, depending on the sites.

Category	Application	Type of processing	Example of items
Critical	Sterile tissues or the blood system	Sterilization (by heat or chemicals)	Dressing and suture instruments, surgical instruments, delivery sets, diagnostic catheters, dental instruments, bronchoscopes, cystoscopes, etc.
Semi-critical	Mucous membranes or non-intact skin	High-level disinfection (HLD) & intermediate level disinfection	Laryngoscope blades, vaginal specula, instruments for MVA, respiratory therapy and anaesthesia equipment. dental impressions, endoscopes, gastroscopes, etc.
Non-critical	Intact skin	Cleaning, low level Disinfection (depending on contact with the type of patient)	bedpans, toilets, urinals, blood pressure cuffs, ECG leads, thermometers, stethoscopes, beds, bedside tables

Patient-care equipment cleaning procedure

- Prepare all cleaning and disinfecting equipment and solution
- Cleaner wear PPE: rubber gloves and boots, impermeable apron. when there is a risk of splash in the face, staff must wear eyes protection and surgical mask.
- Take off any gross soiling on the instrument by rinsing in clean water
- Take instrument apart – fully and immerse all parts in detergent solution, and clean all channels and bores of the instrument
- Ensure all visible soil is take off from the instrument – follow manufacturers’ instructions,
- Rinse thoroughly with clean water

- Dry the instrument (let it dry to– on a clean rack or hang if tubing or items with lumens, away from other dirty items)
- Inspect to ensure the instrument is cleaned

Patient-care equipment disinfecting procedure

- Prepare disinfectant solution according to the volume of medical instruments, following notice of disinfectant, cleaner wearing PPE. The following table shows the most common sources of chlorine in Lao PDR, and the amount of water to add to obtain a 0.5% or 0.05% solution.

Product	Available Chlorine	How to dilute 0.5%	How to dilute 0.05%
Sodium hypochlorite 5% (liquid bleach) If % is different to this, adjust recipe accordingly	5%	1 part bleach to 9 parts water	1 part bleach to 99 parts water
Sodium hypochlorite 6% (liquid bleach)	6%	1 part bleach to 11 parts water	1 part bleach to 119 parts water
Chloramine tablets (1 g liberates 250 mg chlorine) If amount of chlorine liberated is different to this, adjust % and hence recipe accordingly)	25%	20 grams to 1 liter water (20 tablets)	2 grams to 1 liter water (2 tablets)
Tablets that release 100 mg of chlorine	100 mg	50 tablets per 1 liter of water	5 tablets per 1 liter of water
Tablets that release 250 mg of chlorine	250 mg	20 tablets per 1 liter of water	2 tablets per 1 liter of water

- Immerse the cleaned equipment completely in the disinfectant solution. Soak in the solution, duration will depend on the disinfectant recommendations and dilutions. For example: Sodium hypochlorite 0.05%: soak during 30 minutes
- Rinse thoroughly with clear or sterile water (depending on the required level of disinfection and the use of the equipment)
- Sterile water for semi-critical instrument (HLD)
- Clean water for non-critical instrument (low level of disinfectant)
- Let it dry (on a rack)
- Pack the disinfected equipment and store in a clean area

A4.2.5 Soiled linen management procedures

11. Soiled linen, from patients and HCWs should be cleaned, and disinfected/ sterilised when necessary in HCF laundry. To ensure a safe and sanitary environment for laundry staff, PPE should be available, as well as the supply of clean water, and hygienic laundry place.

12. **The basic principles of linen management are as follows:**

- In laundry room, the staff should be protected and wear at least: gloves, surgical mask, and impermeable apron, and close shoes or rubber boots. Where there is no laundry machine, and staff is washing by hands, the staff need to wear eyes protection (e.g. safety glasses)
- Place used linen in bag for linen at the point of generation. Do not rinse in patient care area.
- Any linens soiled with blood/bodily fluid are considered infectious.
- Separate infected linen from non-infected linen and put it in a bag for infectious linen (e.g. yellow impermeable bag). Keep it separated during transport.
- Handle all linen with minimum agitation to avoid aerosolization of patho-genic microorganisms.
- Mattresses and pillows should be covered with plastic and be wiped over with a neutral detergent (refer to environment cleaning). If there is no plastic cover, wash them by hands.

13. **Principles for reprocessing soiled linen:**

	Non-infectious linen	Infectious linen	Infectious drapes from operating room
Overview	Linen from non-infectious patient and without blood/ body fluid	All linens from infectious patients and/ or with blood/ body fluid	All drapes from operating room are infectious.
PPE required when handling linen	Disposable gloves	Disposable gloves (Other PPE may be required depending on route of transmission).	Rubber gloves (Other PPE may be required depending on route of transmission)
Sorting used linen	Place in bag for linens. Separate linens soiled with bodily fluid and put in infectious linens bag.	Place all used linen in bag for infectious linen (e.g. yellow impermeable bag) at the point of generation	Place all drapes in bag for infectious linen (e.g. yellow impermeable bag) at the point of generation.
PPE required in laundry room, when using laundry machine	Gloves Surgical mask; Impermeable apron; Close shoes or rubber boots	Rubber gloves; Surgical mask Eye protection; Impermeable gown or non-impermeable gown with impermeable apron; Rubber boots	Rubber gloves; Surgical mask; Eye protection; Impermeable gown or non-impermeable gown with impermeable apron; Rubber boots

PPE required in laundry room, for hand washing	Rubber gloves, eyes protection, surgical mask, impermeable apron rubber boots,	MUST NOT be hand washed. If not laundry machine available, wash by hands with caution Always wear eyes protection as using disinfectant	MUST NOT be hand washed. If not laundry machine available, wash by hands with caution Always wear eyes protection as using disinfectant
Washing process with hot water (at least 70°C)	Detergent (Laundry liquid or powder) Rinse Dry (dryer or sun & iron)	Detergent (Laundry liquid or powder) Rinse Dry (dryer or sun & iron)	Detergent (Laundry liquid or powder) Rinse Dry (dryer or sun & iron) Bring clean and dried drapes to the central of sterilization
Washing process with warm or cold water (less than 70°C)	Wash with deter-gent (Laundry liquid or powder), Rinse Dry (dryer or sun & iron)	Detergent (Laundry liquid or powder) Rinse Soak in clean water with sodium hypo-chlorite 0.5% for 30 minutes10 Wash again with detergent and water, and dry (dryer or sun & iron)	Detergent (Laundry liquid or powder) Rinse Soak in clean water with sodium hypo-chlorite 0.5% for 30minutes Wash again with detergent and water, and dry (dryer or sun & iron) Bring dried drapes for packaging and sterilization.
Note		If there is no other option (no laundry machine), for infectious linen/ surgical drape, before being wash by hand, they need to be decontaminated at first (soak in disinfectant solution e.g. bleach 0.05% or autoclaved), then they MUST be cleaned rinsed and disinfecting, and sterilisation for sterile drapes, to avoid contamination of patient	

A4.2.6 Environmental cleaning procedure

14. Most areas of HCFs, are low risk zone (non-infectious zone), these areas should be cleaned daily, with detergent solution (soapy water) to remove dirt and organic material and dissolve or suspend grease, oil, and other matter so it can easily be removed by scrubbing. In high-risk areas where heavy contamination is expected and risk of cross-contamination by the staff and other patients, surfaces need to be cleaned with soapy water, rinsed, and let it dry,

before being disinfected (e.g. sodium hypochlorite (chlorine) solution 0.05%). High risk areas are for instance, operating rooms, pre- and postoperative recovery areas, intensive care units (ICUs), isolation room, laboratory, toilets and latrines; or area with blood/ body fluid spills. When cleaning, cleaners are at risk and need to be properly trained. They also must wear appropriate PPE, at least rubber gloves, rubber boots, uniform or apron. When there is risk of splash in the face, wear surgical mask and eyes protection.

15. Key procedures are as follows:

Principles of Environmental Cleaning

- Apply hand washing / hygiene and wear appropriate PPE (at least rubber gloves, rubber boots, uniform or apron. When risk of splash in the face, wear surgical mask and eyes protection).
- Prepare fresh cleaning and household solution once a day; and change solution whenever they appear to be dirty.
- Perform cleaning and disinfecting patient environment at least once a day.
- Clean first with detergent (soapy water), rinse with water, let it dry in non-patient area (e.g. including corridor, laundry room etc.)
- In high risk area (patient care area), following cleaning procedure, disinfect surface by using household disinfectant (e.g. bleach 0.05% solution, alcohol 70% for small object, or follow manufacture recommendations).
- Every day clean all patients' rooms, units, cleaner's rooms
- Cleaning with a moistened cloth helps to avoid contaminating the air and other surfaces
- Clean from the less contaminated to the most contaminated area (e.g. start from corridor, then patient' room, and last finish to clean bathroom and toilet)
- After patient discharge, clean and disinfect patient room very well, including all equipment that has been in contact with patient (e.g. bed, bed table...) as soon as possible
- After use, all cleaning equipment (e.g. mop, brush, bucket, cloth...) must be cleaned, disinfected and dried before storage, and be reused.
- In general, do not spray (i.e. fog) occupied or unoccupied clinical areas with disinfectant. This is a potentially dangerous practice that has no proven disease control benefit.

Cleaning up Spills

- Clean up spills of potentially infectious fluids immediately, to preventing the spread of the infection and also prevents accidents.
- Small spills of blood of other body fluids should be wiped with paper towel (staff using disposable gloves), then clean with soapy water, rinse and disinfect.

Appropriate handling of bedding

- Mattresses and pillows with plastic covers should be cleaned with detergent, after departure of each patient.

- In isolation unit and intensive care unit, as well as infectious wards (e.g. TB..) disinfecting should follow cleaning procedure.

A4.2.7 Prevention of needle-stick/sharp injuries

16. In healthcare settings, injuries from needles or other sharp instruments are the number-one cause of occupational exposure to blood-borne infections. All staff that come in contact with sharps - from doctors and nurses to those who dispose of the trash - are at risk of infections. Improper disposal of sharps also poses a great threat to members of the community.

17. The term *sharps* refers to any sharp instrument or object used in the delivery of healthcare services - including hypodermic needles, suture needles, scalpel blades, sharp instruments, intravenous (IV) catheters, and razor blades. Needle stick/sharp injury means the skin is accidentally punctured by a used needle/ sharp (e.g. scalpel). The injury is a port of entry for blood-borne diseases, such as hepatitis B (HBV) and hepatitis C (HCV), HIV etc. Exposure to patient's body fluid also put HCWs at risk of infection. Therefore, they are encouraged to strictly comply with IPC precautions related to body fluid.

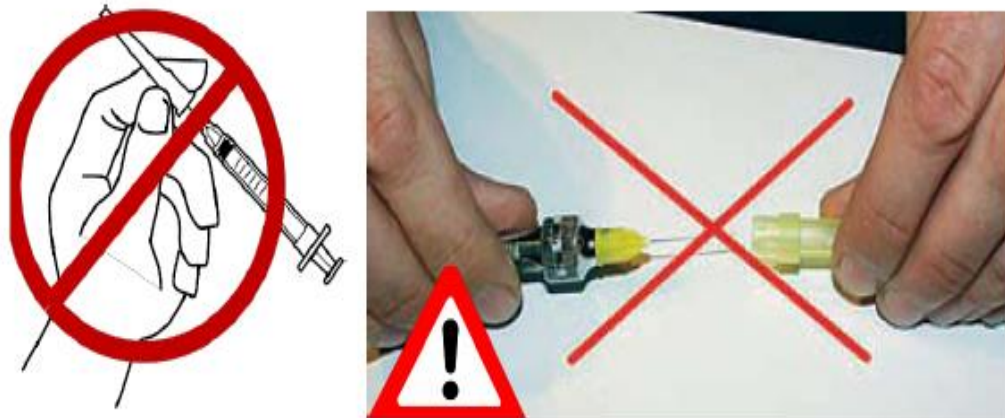
18. Key procedures are as follows:

The main causes of needle stick/sharp injury include:

- Recapping of needles (identified as the most common cause)
- Unsafe handling of sharp waste (identified as the second most common cause)
- Reuse of safety box
- Manipulation of used sharps (bending, breaking, or cutting needles).
- Unnecessary injections
- Lack of supplies: disposable syringes, sharps-disposal container/safety box
- Failure to place needles in sharps containers immediately after injection
- Passing sharps from hand to hand (e.g. during surgery)
- Lack of management of sharp wastes
- Lack of awareness of the problem
- Lack of training for staff

Principle of the disposal of used needles/sharps

- Never recap needle/sharp



- Dispose of needles and syringes immediately after use in the safety box.
- Close the safety box, whenever the containers become ¾ full.
- Safely dispose the safety box (e.g. via incinerator with temperature at least of 800o Celsius)
- When it is not immediately disposed, keep safety boxes in appropriate storage, for infectious waste.

Refer to “Healthcare Waste Management Guidelines 2011” and “National Injection Safety Guidelines 2014”, for more information.

Safety Box or Sharp disposal container

- Safety boxes **MUST** be puncture and leak resistant. They should be conveniently located in any area where sharp objects are frequently used (such as injection rooms, treatment rooms, operating theatres, labour and delivery rooms, and laboratories).






| Figure 52
Disposal of needles:
incorrect (left) and correct
(right) disposal of needles

A4.2.8 Contact precautions

19. Procedures are as follows:

Requirements	Contact Precautions
Single Room	Yes, or Cohort with patient with same pathogen in consultation with infection prevention and control focal point.
Negative Pressure	No
Hand Hygiene	Yes Hand cleaning with soap and water or AHR
PPE for staff/ visitor	
Gloves	Yes, If there is direct contact with the patient or their environment Rubber gloves, when cleaning, disinfecting
Gown/Apron	Yes, If there is direct contact with the patient or their environment.
Mask	Standard Precautions Use to protect face if splash or aerosol likely
Protective eyewear	Standard Precautions Use to protect eyes if splash likely to be generated
Rubber boots	Standard precautions When risk of infected liquid on the foot, walking where contaminated floor
Patient Equipment	Designated equipment (1 equipment/ 1 patient) Or if not possible clean and disinfect before to use to the next patient. To avoid infection of other patients (nosocomial infection) via contaminated equipment.
Transport of Patients (inside and outside of hospital)	<ul style="list-style-type: none"> • limit transport, only when necessary • Notify the area receiving patient. • choice un-crowded way to transport patient inside of hospital • transport staff need to wear PPE for contact precautions • PPE for patient: <ul style="list-style-type: none"> ◦ Put a drape on top of the patient (to avoid risk of contamination of the environment during the transport)

	<ul style="list-style-type: none"> ◦ If patient has also respiratory symptoms, patient should wear surgical mask during the transport • Clean and disinfect transport material or vehicle
After leaving the isolation room	<ul style="list-style-type: none"> • when transferring patient from outside to isolation unit, use the dedicated entrance for infectious patient, if available • Take off PPE in the ante-room (if ante-room is not available, in the dedicated area – e.g. corridor) and perform hand hygiene
Room Cleaning	<ul style="list-style-type: none"> • Refer to Annex 15 and Hospital Cleaning Procedure • Cleaner staff wear PPE for contact precaution plus rubber gloves, rubber boots and impermeable apron • May require additional cleaning with a disinfectant solution depending on the pathogen.
Remarks	<ul style="list-style-type: none"> • Everyone entering in the isolation room or unit, need to record their name and contact in the logbook. • Patient Medical Records/document, pen, mobile phone... must not be taken into the room. • Put a sign contact precaution room.


CONTACT PRECAUTIONS	
	
	
<p>Staff, Visitors, Family, must report to nursing desk before entering</p>	
<p>Staff, Visitors, Family, must</p> <ul style="list-style-type: none"> • Perform hand washing before entering and when leaving • Wear disposable gloves and gown/ apron before enter • Leave patient care equipment, food in the room and inform unit staff • When leaving the isolation room, take off PPE (in anteroom or designated area) and • Perform hand hygiene 	

A4.2.9 Droplet precautions

20. Procedures are as follows:

Requirements	Droplet Precautions
Single Room	<p>Yes or</p> <p>Cohort with patient with same pathogen (in consultation with infection control professional, or infectious diseases physician).</p> <p>It is recommended that single patient rooms be fitted with ensuite facilities. In the advent of no ensuite facilities, a toilet and bathroom should be dedicated for individual or cohort patient use.</p>
Negative Pressure*	No
Hand Hygiene	<p>Yes</p> <p>Hand cleaning with soap and water or water-free alcohol based skin cleanser.</p>
PPE for staff/ visitor	
Gloves	<p>Standard Precautions</p> <p>Use to protect for anticipated contact with blood and body substances.</p>
Gown/Apron	<p>Standard Precautions</p> <p>Use to protect where soiling or splashing are likely.</p>
Mask	<p>Yes</p> <p>Surgical Mask</p> <p>Take off mask after leaving patients room.</p>
Protective Eyewear	Yes
Handling of Equipment	<p>Standard Precautions</p> <p>Avoid contaminating environmental surfaces and equipment with used gloves.</p>
Transport of Patients	<ul style="list-style-type: none"> • Respiratory hygiene for coughing and sneezing patients suspected of having an infectious respiratory illness. • Surgical mask for patient when they leave the room.

	<ul style="list-style-type: none"> • Patients on oxygen therapy must be changed to nasal prongs and have a surgical mask over the top of the nasal prongs for transport (if medical condition allows). • Advise transport staff of level of precautions to be maintained (droplet precautions). • Notify area receiving the patient. • Clean and disinfect transport material or vehicle.
Alert	<ul style="list-style-type: none"> • When cohorting patients, they require minimum of one metre of patient separation. • Visitors to patient room must wear a surgical mask and protective eyewear (if unable to maintain 1 meter distance) and perform hand hygiene. • Patient Medical Records must not be taken into the room. • Signage of room.
Room Cleaning	<ul style="list-style-type: none"> • Refer to Annex 15 and Hospital Cleaning Procedure • May require additional cleaning with a disinfectant agent depending on organism. • Consult with infection control professional.

DROPLET PRECAUTIONS
 <p>Staff, Visitors, Family must report to nursing desk before entering</p>
<p>Staff, Visitors, Family must</p> <ul style="list-style-type: none"> • Perform hand washing before entering and before leaving the room • Wear at least surgical mask and eyes protection when entering room • Leave patient care equipment in the room and inform unit staff • When leaving the isolation room, take off PPE (in anteroom or designated area) • Perform hand washing


A4.2.10 Air-borne precautions

21. Procedures are as follows:

Requirements	Airborne Precautions
Single Room	Yes Door closed It is recommended that single patient rooms be fitted with ensuite facilities. If no en-suite facilities, a toilet and bathroom should be dedicated for individual patient use.
Negative Pressure*	Yes, if available otherwise single room with door closed and window open
Hand Hygiene	Yes Hand cleaning with soap and water or water-free alcohol based skin cleanser
PPE for staff/ visitor	
Gloves	Standard Precautions Use to protect for anticipated contact with blood and body substances
Gown/Apron	Standard Precautions Use to protect where soiling or splashing are likely
Mask	Yes, N95 or P2 Mask (perform fit check each time a mask is worn to ensure it fits the face firmly with no gaps between the mask and the wearers face according to manufacturer instructions prior to entering room) Take off mask after leaving patient room
Protective eyewear	Standard Precautions Use to protect eyes if splash likely or where aerosol may be generated
Handling of Equipment	Standard Precautions Avoid contaminating environmental surfaces and equipment with used gloves
Transport of Patients	<ul style="list-style-type: none"> • Surgical mask for patient when they leave the room • Patients on oxygen therapy must be changed to nasal prongs and have a surgical mask over the top of the nasal prongs for transport (if medical condition allows). • Advise transport staff of level of precautions to be maintained (airborne).

	<ul style="list-style-type: none"> • Respiratory hygiene for coughing and sneezing patients suspected of having an infectious respiratory illness. • Notify area receiving patient. • Clean and disinfect transport material or vehicle.
Alert	<ul style="list-style-type: none"> • Respiratory hygiene for coughing patients • Visitors to patient room must also wear P2 or N95 mask and perform hand hygiene • Signage of room indicating precautions to be applied • Patient Medical Records must not be taken into the room.
Room Cleaning	<ul style="list-style-type: none"> • Refer to Annex 15 and Hospital Cleaning Procedure. • May require additional cleaning with a disinfectant agent depending on the organism. • Consult with infection control professional.

AIRBORNE PRECAUTIONS



Staff, Visitors, Family, must report to nursing desk before entering

Staff, Visitors, Family must

- Perform hand washing before entering
- Wear particulate respirator (N95) before enter
- Leave patient care equipment in the room and inform unit staff
- When leaving the isolation room, take off PPE (in anteroom or designated area) and
- Perform hand washing

A4.2.11 Specific procedures for managing patients in isolation unit

22. **Preparation of isolation Room / unit**

- Isolate infectious patient in a single room
- If there is no single room, isolate in the cohort room. In cohort room, always keep suspected cases separate from confirmed cases
- If single and cohort room, keep the single room for suspected cases and the cohort room for confirmed cases
- Avoid movement of infectious suspected and confirmed patients (only if crucial)
- Limit number of visitor (ideally only one)
- Staff help the visitor select PPE base on route of transmission, visitor must be trained for wearing PPE
- Put a clear sign of restrictive area and fence around isolation room/unit
- Set up isolation room/ unit as per standard

- Prepare the isolation room and ensure refurbishment of PPE/ material.

23. The following items should be kept on the trolley at all times so that PPE is always available for healthcare workers

Equipment	Stock present
Eye protection (visor or goggles)	
Face shield (provides eye, nose and mouth protection)	
Gloves <ul style="list-style-type: none"> • reusable vinyl or rubber gloves for environmental cleaning • latex single-use gloves for clinical care 	
Hair covers (optional)	
Particulate respirators (N95, FFP2, or equivalent)	
Medical (surgical or procedure) masks	
Gowns and aprons <ul style="list-style-type: none"> • single-use long-sleeved fluid-resistant or reusable non-fluid-resistant gowns • plastic aprons (for use over non-fluid-resistant gowns if splashing is anticipated and if fluid-resistant gowns are not available) 	
Alcohol-based hand rub	
Plain soap (liquid if possible, for washing hands in clean water)	
Clean single-use towels (e.g. paper towels)	
Sharps containers	
Appropriate detergent for environmental cleaning and disinfectant for disinfection of surfaces, instruments or equipment	
Large plastic bags	
Appropriate clinical waste bags	
Linen bags	
Collection container for used equipment	

24. **HCWs/staff in the isolation room /unit**

- Apply IPC standard and adequate additional precaution(s) based on route of transmission
- For emerging infectious disease (EID), with unknown route of transmission, apply standard precautions and all additional precautions (contact+ droplet+ airborne), until the route of transmission has been identified (staff will wear FULL PPE, maximum protective personal equipment)
- Exclusively assigned trained staff (medical and non-medical)
 - + If HCW is not trained, he/she must not wear PPE and enter in the isolation room
- Prior entering to the room:
 - + HCW must record their name and contact details
 - + Perform hand hygiene and wear PPE for identify route of transmission (following PPE procedure)
- After contact with isolated patient:
 - + HCW must safely take off PPE, and thoroughly wash hands precautions (following PPE procedure)

25. **PPE Procedure in Isolation room/ unit**

- The PPE to wear will depends on the type of isolation precautions; therefore several PPE procedures are possible. Keep in mind the steps of removing the PPE (from more contaminated to less), this will guide the step of putting on the PPE.

- Example of PPE procedure when all PPE items are needed (based on assessment of the risk and route(s) of transmission).

A. Putting on PPE (when all PPE items are needed)



- 1**
- Identify hazards and manage risk.
 - Gather the necessary PPE.
 - Plan where to put on and take off PPE.
 - Do you have a buddy? Mirror?
 - Do you know how you will deal with waste?

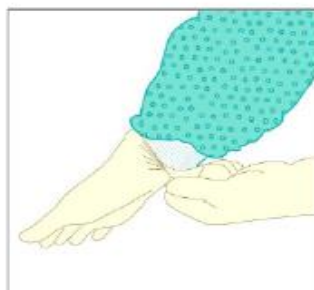


- 2** Put on a gown.



- 3** Put on particulate respirator or medical mask; perform user seal check if using a respirator.

- 4** Put on eye protection, e.g. face shield/goggles (consider anti-fog drops or fog-resistant goggles). Caps are optional: if worn, put on after eye protection.



- 5** Put on gloves (over cuff).

B. Taking off PPE



- 1**
- Avoid contamination of self, others and the environment
 - Remove the most heavily contaminated items first.

Remove gloves and gown:

- peel off gown and gloves and roll inside, out;
- dispose of gloves and gown safely.



- 2** Perform hand hygiene.



- 3**
- Remove cap (if worn).
 - Remove goggles from behind.
 - Put goggles in a separate container for reprocessing.



- 4** Remove respirator from behind.



- 5** Perform hand hygiene.

26. Environment Cleaning / Disinfecting

- Trained staff is wearing PPE depending on route of transmission, adding rubber gloves, impermeable apron, rubber boots.

- + In isolation room, all surfaces (floor, table...) need to be cleaned, than disinfected once per day.
- When heavy contamination (blood, vomit, faeces) on surface and floor, take off spill, clean with detergent, disinfect with chlorine solution 0.5%.
- Refer to the list of disinfectant to select those that will inactivated the pathogen. The most common hospital disinfectant include:
 - + Sodium hypochlorite (household bleach);
 - + Ethyl alcohol 70%;
 - + Phenolic compounds;
 - + Quaternary ammonium compounds;
 - + Peroxygen compounds.
- Refer to dilution table, to prepare the detergent disinfectant solution.
- Some disinfectant solution, provide the two actions (detergent and disinfectant) in one product, follow instruction for that specific product.

27. ***Reprocessing reusable equipment***

- Clean with detergent, then soak into chlorine solution 0.05% for at least 30 minutes, rinse and let it dry in a clean area.
- If using google or safety glasses, clean with detergent, then soak in chlorine solution 0.05% for 10 minutes (30 minutes can damage the goggle, glasses), thoroughly rinse (avoid irritation of eyes) and let it dry in a clean area, before reusing.
- Refer to the Preparation of Sodium Hypochlorite Solution Procedure.
- Contaminated equipment should be placed in clearly-labelled, leak-proof bags or closed container.
- Transport of equipment bag/container from the anteroom to the cleaning/ utility room
 - + The trained staff wears disposable gloves and mask to transport the bag to the cleaning room.
 - + Place the leak-proof bag into a new bag (double bag)
- or
- + Disinfect the outside part of the container with e.g. chlorine solution 0.05%
- + Use a wheeled bin with a lid or trolley (covered trolley is preferred) to transport the bag. The staff must not carry the bag/container.
- + Clean and disinfect all surfaces of the trollies or bins, after each use
- Cleaning staff, like other staff need to check and record their temperature twice a day, and notify to chief of unit or IPC team, if any symptoms.

28. ***Soiled linen:***

- Soiled linen must be proceeding by trained staff wearing PPE (depending on the pathogen route of transmission). At least wear rubber gloves, impermeable apron, and rubber boots (refer to Appendix 1D appropriate handling of soiled linen)
- Wash with detergent and disinfect linen daily.
- If there is any solid excrement such as faeces or vomit,
 - + Remove carefully, and flush it down the toilet (if proper sewage) or in the sluice before linen is placed in its bag or container.
 - + If not proper sewage, remove carefully, discharge in waste bag,

- + or decontaminate with disinfectant solution (concentration depending on the pathogen)
- Soiled linen should be placed in clearly-labelled, leak-proof bags or closed container.
- Transport of linen bag/container from the anteroom the laundry room
 - + Place the leak proof bag into a new bag (double bag) or
 - + Disinfect the outside part of the container with e.g. chlorine solution 0.05%
 - + The trained staff wears disposable gloves and mask to transport the linen bag to the laundry
 - + Use of a wheeled bin with a lid or trolley (covered trolley is preferred). The staff must not carry the bag/container.
 - + Clean and disinfect all surfaces of the trollies or bins, after each use
- In the laundry room, trained staff wear PPE wearing PPE depending on the pathogen route of transmission, with rubber gloves, waterproof apron and rubber boots), wash infected linen with laundry machine:
 - + In hot water of 70°C: wash with detergent or disinfectant (30 minutes).
 - + In cold water (< 70°Celsius): wash with detergent, then disinfectant that are active in cold water. When using bleach, rinse in clean water, and dry before reuse.
- Laundry staff, like other staff need to check and record their temperature twice a day, and notify to chief of unit or IPC team, if any symptoms

29. *Management of Infectious Waste*

- Only trained staff, wearing PPE depending on the pathogen route of transmission, with rubber gloves, impermeable apron and rubber boots, must handling infectious waste in the isolation room/ IU (see Appendix 2 Transmission based Precautions)
- Dispose needle/sharps in a sharp-proof container (as per standard precautions), and never re-cap needles and/or separate needle from syringe before disposing in the container.
- Dispose infectious waste in a “biohazard” labelled waste bag, or leak-proof waste bag (refer Appendix 1G HCWM)
- Management of solid infectious waste
- Transport of infectious waste bag from isolation room/ unit to incinerator or designated pit:
 - + Put the waste bag in another clean bag (double bagging) before exiting the isolation area or decontaminate container/bag with the infectious waste, with chlorine solution 0.05%.
 - + Outside the isolation area, staff who is helping for double bagging, transport the decontaminated bags/containers, should wear at least gloves and disposable mask if outside the isolation zone.
- When storing bag/container with infected waste, before being properly manage
 - + Do not stored them more than 24 hours
 - + The store place must be protected by a fence to prevent entry by animals, children, or untrained personnel
- Management of waste bags with infected solid waste
 - + Incinerate bags with infectious wastes (high temperature > 800oC.)
 - + Disinfect infectious waste by autoclave
 - + Bury in a designated pit of appropriate depth (e.g. 2 metres)

- Management of infected liquid waste (blood, faeces, urine and vomit, grey water, etc.)
- With adequate PPE, depending on the pathogen route of transmission, adding eyes protection and surgical mask (if not worn)
 - + Flush liquid waste (e.g. urine, liquid faecal waste) into the sewage system, if there is an adequate system in place.
 - + Avoid splashing when disposing of liquid infectious waste to avoid possible generation of aerosols
- When hospital does not have an adequate system
 - + Select adequate disinfectant solution for the pathogen
 - + In general, disinfect liquid waste with chlorine 0.05% or 0.5% depending on the pathogen before disposing (e.g. disinfect cholera with chlorine solution 0.5%)
- Avoid splashing when pouring disinfectant solution

30. ***Handling of dead bodies***

- Discourage any local practices (touching/ being in contact with the corpse) by HCW, family, friends...
- Dead body remains should not be sprayed, washed or embalmed.
- PPE to safely handle dead body. Refer to route of transmission, with at least:
 - + Disposable gown with long-sleeves
 - + Waterproof apron
 - + Disposable, non-sterile gloves (over the cuffs of the gown)
 - + Surgical mask (wear particulate mask if autopsy)
 - + Eyes protection (preferable face-shield, or goggle)
 - + Rubber gloves
 - + Rubber boots
- Put corpse in waterproof/ impermeable body bag immediately; and transfer to the mortuary as soon as possible after death.
- Bury or incinerate corpse without delay
- Surveillance of staff who handle dead body (need to check and record their temperature twice a day, and notify to chief of unit, IPC team if any symptoms)

31. ***Occupational health***

- Any staff and visitor who is entering in the isolation room/ isolation unit (IU), or has any contact with contaminated equipment, linen, waste, dead body **MUST**:
 - + Register their name and contact details in the log book of isolation room/ unit, for contact tracing purpose.
 - + Follow up health status, fever and other symptoms (refer to suspect case definition/ triage form)
 - + Take and record temperature twice daily, for the entire incubation period after the last contact
 - + Notify to chief of unit, IPC team, focal point if any symptoms
- Have a good hygiene, drink plenty of safe drinking water, and rest to avoid mistake due to overwhelmed, severe fatigue.
- Provide supervision and support from chief of IU, IPC focal point and director of hospital
- Promote preventive medicine:
 - + No pregnant women should be working in isolation room/ unit

- + Provide psychological support to the staff/team who work in isolation room/unit
- + Prevent heat illness/ dehydration (serious risk of heat illness while wearing PPE in tropical conditions)
- For HCWs who are developing symptoms
- Stop work immediately or do not report to work
- Limit interactions with others
- Exclude themselves from area,
- Notify the chief of unit or focal point if any fever $> 38^{\circ}\text{C}$. and/ or other symptoms (refer to case definition)
- Exposed persons must receive follow-up care (e.g. antiviral therapy when available), counselling and psychological support
- Inform supervisor, for contact tracing and follow-up of family, friends, co-workers and other patients, who may have been exposed to the disease through close contact with the infected HCW/staff.

32. *Managing Blood/ Body fluid Exposure*

- Persons including HCWs with percutaneous or muco-cutaneous exposure to blood, body fluids, secretions, or excretions from a patient with suspected or confirmed infectious disease, should immediately and safely stop any current tasks, and leave the patient care area.
- Safely take off PPE according to the steps in the procedure, in the anteroom
- Treat affected exposed area:
 - + wash the affected skin surfaces or the percutaneous injury site with soap and water
 - + Irrigate mucous membranes (e.g. conjunctiva) with copious amounts of water or an eyewash solution, and not with chlorine solutions or other disinfectants.
- Immediately report the incident to the chief of unit, IPC focal point (following hospital exposure procedure) as soon as the HCF staff exist the isolation room/ unit.
- Exposed persons should be medically evaluated for:
 - + infectious disease (ID) (of isolated patient)
 - + other potential exposures (e.g., HIV, HCV) if sharp/needle-stick injury
- Exposed persons must receive follow-up care, including:
 - + fever monitoring, twice daily
 - + period of recording symptoms will depend on the ID
 - + Counselling and psychological support
- Immediate consultation with an expert in infectious diseases for any exposed person who develops fever, symptoms after exposure.
- If fever appears and other symptoms, isolate HCF staff, and follow procedure for ID suspected until a negative diagnosis is confirmed.

Or

- People suspected of having infected should be cared for/isolated, and the same recommendations outlined in this document must be applied until a negative diagnosis is confirmed.
- Conduct contact tracing and follow-up of family, friends, co-workers and other patients, who may have been exposed to Ebola virus through close contact with the infected HCW/ staff.

A4.3 Healthcare Waste Management Procedures (HCWMP)

33. While approximately 80% of the wastes generated in a HCF are general waste, the remaining 20% comprise wastes that contain harmful microorganisms which can infect hospital patients, HCFs staff and the general public, as well as sharp objects and hazardous substances that can result in injuries, poisoning and pollution.

Categorization of healthcare wastes

34. Healthcare waste is broadly categorized into two main groups, namely medical wastes and general wastes.

1. General wastes or household waste

- Any waste that are solid or semi-solids generated from HCFs that are non-toxic and non-hazardous and are not contaminated with medical wastes. These are the food wastes, paper, plastics, textiles, non-toxic metals, glass and garden wastes.
- In the event that general wastes are contaminated or mixed with any medical wastes, the general wastes shall be classified as medical wastes and managed accordingly.

2. Medical wastes

- Any waste which consists completely or partly of human or animal tissue, blood or other body fluids, excretions, drugs or other pharmaceutical products, swabs or dressings, syringes, needles or other sharps instruments, ... all wastes that are hazardous or can cause infection to any person coming into contact with it.
- Any other wastes generated from healthcare activities which may be hazardous or toxic.
- The categories of medical wastes are:
 - 1) Infectious wastes
 - 2) Pathological wastes
 - 3) Sharps wastes
 - 4) Pharmaceutical wastes
 - 5) Genotoxic wastes
 - 6) Chemical wastes
 - 7) Wastes with high content of heavy metals
 - 8) Pressurized containers
 - 9) Radioactive wastes



35. **Proper healthcare waste management** includes (1) waste segregation, (2) collection and handling, (3) stock in a safe temporary storage, (4) safe treatment and disposal.

1. Organize waste segregation:

36. All HCFs shall organize waste segregation at sources. Each type of waste should be contained in designated, color coded and labelled bags and containers. These are:

- green bin: general waste or household waste
- yellow bin: infectious waste, main part of the medical waste
- brown bin: chemical and pharmaceutical wastes, wastes with high content of heavy metals
- red bin: genotoxic waste, radioactive waste
- black bin: pressurized containers

Waste Category	Colour of Container & Markings	Proposed Symbol
Infectious waste	Yellow, marked black	
Pathological wastes	Yellow, marked red	
Sharps "safety-box"	Yellow, marked "SHARPS"	
Chemical & pharmaceutical waste	Brown, marked "HAZARDOUS"	
Wastes with high content of heavy metals	Brown, marked with the specific heavy metal content and "HAZARDOUS"	
Genotoxic waste	Red, marked "CYTOTOXIC"	
Radioactive waste	Red	
Pressurized containers	Black	
General waste	Green	

2. Handling

- Staff should handle medical waste as little as possible before storage and disposal. The more waste is handled, the greater the chance for accidents.
- Special care must be taken when handling used needles and other sharps, which pose the greatest risk of accidental injury and infection.

37. *Emptying waste containers*

- Waste containers that are too full also present greater opportunities for accidents. Waste should be removed from operating theatres, procedure rooms, and sluice rooms before the containers become completely full. At the very least, these containers should be emptied once a day. Dispose of sharps containers when they are 3/4 full. (When sharps-disposal containers become too full, people may push sharps into the container, causing injury.)
- Staff should wear utility gloves, heavy duty apron and boots when collecting waste.
- Do not collect medical waste from patient-care areas by emptying it into open carts or wheelbarrows, as this may lead to spills and contamination of the surroundings,

may encourage scavenging of waste, and may increase the risk of injury to staff, patients, and visitors.

- Handle medical waste as little as possible.
- Never put your hands into a container that holds medical waste.

3. Stock in a safe temporary storage

38. Following segregation, medical wastes should be placed in a designated, safe (locked) and temporary storage at HCFs. Different health care waste should be streamed separately in standard storage equipment. Storage time of infectious waste should not exceed 48 hours. Anatomical waste should be buried or disposed daily.

39. The central storage area must be:

- Located separately from the general waste storage areas.
- Should be clearly identifiable.
- Away from food preparation, public access and egress route.
- Arranged to store waste for landfill and waste for incineration waste separately.
- Well ventilated and well lit.
- Located on well drained, impervious hard-standing.
- Provided facilities for washing down and disinfection.

4. Treatment and disposal of medical waste

40. General wastes can be removed to the regular community waste-disposal (land field). Infectious waste can be treated by the following methods:

- **Incineration.** Two-chambered incinerators with proper temperature, required chimney heights should be used. The temperature must be at least of 800°C to ensure minimal emission of toxic gases at the primary chamber. Appropriate location and high chimney (higher than nearby roofs) are required. Pressured gas containers, radioactive wastes, radiographic wastes, halogenated plastics like PVC, mercury, cadmium and ampoules of heavy metals should never be incinerated. Several provinces in Cambodia have installed two-chambered incinerators for medical waste treatment in the centralized model. Health centers and district hospitals are recommended to transport sharp waste to these incinerators for treatment.
- Single-chamber, drum and brick incinerators cannot meet the best available technology requirements of the Stockholm Convention on Persistent Organic Pollutants, of which Cambodia is signatory. Emissions of toxic and persistent organic pollutants (dioxin, furans, etc.) from these small-scale incinerators may result in human exposure at levels associated with adverse health risks. The project will not finance new small-scale onsite incinerator. If existing on-site incinerators are used, mitigation measures will be taken to control emissions to air in line with WBG EHS for healthcare facilities and WHO's guidelines for safe management of waste generated from healthcare activities.
- The good practices as follow:

- + Waste reduction and segregation to minimize quantities of waste to be incinerated;
 - + Siting incinerators away from patient wards, residential areas or where food is grown;
 - + A clearly described method of operation to achieve the desired combustion conditions and emissions; for example, appropriate start-up and cool-down procedures, achievement and maintenance of a minimum temperature before waste is burned, use of appropriate loading/charging rates (both fuel and waste) to maintain appropriate temperatures, proper disposal of ash and equipment to safeguard workers;
 - + Periodic maintenance to replace or repair defective components;
 - + Improved training for operators and improved management including the availability of an operating and maintenance manual, visible management oversight, and regular maintenance schedules.
- **Autoclave.** Autoclave used to decontaminate infectious waste is required for laboratory (Level BS2+ and BSL3). They are available in some laboratories in Cambodia. All laboratory equipment, materials and fluids must be decontaminated in the autoclave, before being discharged out of the laboratory.
 - **Sharp pit and Placenta pit:** Placenta and small anatomical waste should be disposed to placenta pit and sharp waste should be disposed to sharp pit where there is no effective incineration.
 - **Secured landfill.** This is the minimal approach to sharp waste disposal, which should be used only in remote and underdeveloped areas. Even in difficult circumstance, the health facility should establish the following basic principles:
 - + Locates the burial site away from the groundwater supply sources
 - + Restrict access to the disposal site by unauthorized persons
 - + Line the burial site with a material of low permeability, such as clay, dung and river silt, if available, to prevent pollution of shallow groundwater and nearby wells.
 - + Bury sharp waste and infectious waste only
 - + Each layer of waste should be covered by a layer of soil to prevent odors, rodents and insects.

5. Waste water collection and treatment

a. Overall requirements

41. Health and environmental workers should always wear heavy utility gloves and shoes when handling or transporting liquid medical waste of any kind. When carrying or disposing of liquid medical waste, they should be careful to avoid splashing the waste on yourself, others, or on the floor and other surfaces.

42. Carefully pour liquid waste down a sink, drain, flushable toilet, or latrine. If this is not possible, bury it in a pit along with solid medical waste. Moderate quantities of mild liquid or semi-liquid pharmaceuticals such as solutions containing vitamins, cough syrups, intravenous solutions, eye drops (but not antibiotics or cytotoxic drugs), may be diluted in a large flow of water and discharged into municipal sewers. Pharmaceutical wastes shall not be disposed of

into slow-moving or stagnant water. Pharmaceutical wastes shall not be disposed of into slow-moving or stagnant water.

43. All facilities should have appropriate drainage. If the facility does not link to a treated municipal water drainage system, then all drainage should be treated locally. This includes appropriate septic and filtration systems. Highly infectious waste should be disinfected by proper disinfectants or autoclaved before they are disposed of either by incineration or non-incineration processes. Unless there is an adequate waste-water treatment plant, blood should be disinfected before discharged to a sewer.

b. Management of faecal waste and wastewater in COVID-19 outbreak

44. There is no evidence that the COVID-19 virus has been transmitted via sewerage systems with or without wastewater treatment. Further, there is no evidence that sewage or wastewater treatment workers contracted the severe acute respiratory syndrome (SARS), which is caused by another type of coronavirus that caused a large outbreak of acute respiratory illness in 2003. As part of an integrated public health policy, wastewater carried in sewerage systems should be treated in well-designed and well-managed centralized wastewater treatment works. Each stage of treatment (as well as retention time and dilution) results in a further reduction of the potential risk. A waste stabilization pond (an oxidation pond or lagoon) is generally considered a practical and simple wastewater treatment technology particularly well suited to destroying pathogens, as relatively long retention times (20 days or longer) combined with sunlight, elevated pH levels, biological activity, and other factors serve to accelerate pathogen destruction. A final disinfection step may be considered if existing wastewater treatment plants are not optimized to remove viruses. Best practices for protecting the health of workers at sanitation treatment facilities should be followed. Workers should wear appropriate personal protective equipment (PPE), which includes protective outerwear, gloves, boots, goggles or a face shield, and a mask; they should perform hand hygiene frequently; and they should avoid touching eyes, nose, and mouth with unwashed hands.

- *Sanitation and plumbing*

45. People with suspected or confirmed COVID-19 disease should be provided with their own flush toilet or latrine that has a door that closes to separate it from the patient's room. Flush toilets should operate properly and have functioning drain traps. When possible, the toilet should be flushed with the lid down to prevent droplet splatter and aerosol clouds. If it is not possible to provide separate toilets, the toilet should be cleaned and disinfected at least twice daily by a trained cleaner wearing PPE (gown, gloves, boots, mask, and a face shield or goggles). Further, and consistent with existing guidance, staff and health care workers should have toilet facilities that are separate from those used by all patients.

46. WHO recommends the use of standard, well-maintained plumbing, such as sealed bathroom drains, and backflow valves on sprayers and faucets to prevent aerosolized faecal matter from entering the plumbing or ventilation system, together with standard wastewater treatment.²¹ Faulty plumbing and a poorly designed air ventilation system were implicated as contributing factors to the spread of the aerosolized SARS coronavirus in a high-rise apartment building in Hong Kong in 2003.²² Similar concerns have been raised about the spread of the COVID-19 virus from faulty toilets in high-rise apartment buildings.²³ If health care facilities

are connected to sewers, a risk assessment should be conducted to confirm that wastewater is contained within the system (that is, the system does not leak) before its arrival at a functioning treatment or disposal site, or both. Risks pertaining to the adequacy of the collection system or to treatment and disposal methods should be assessed following a safety planning approach,²⁴ with critical control points prioritized for mitigation.

- *Toilets and the handling of faeces*

47. It is critical to conduct hand hygiene when there is suspected or direct contact with faeces (if hands are dirty, then soap and water are preferred to the use of an alcohol-based hand rub). If the patient is unable to use a latrine, excreta should be collected in either a diaper or a clean bedpan and immediately and carefully disposed of into a separate toilet or latrine used only by suspected or confirmed cases of COVID-19. In all health care settings, including those with suspected or confirmed COVID-19 cases, faeces must be treated as a biohazard and handled as little as possible. Anyone handling faeces should follow WHO contact and droplet precautions and use PPE to prevent exposure, including long-sleeved gowns, gloves, boots, masks, and goggles or a face shield. If diapers are used, they should be disposed of as infectious waste as they would be in all situations. Workers should be properly trained in how to put on, use, and remove PPE so that these protective barriers are not breached.²⁵ If PPE is not available or the supply is limited, hand hygiene should be regularly practiced, and workers should keep at least 1 m distance from any suspected or confirmed cases.

48. If a bedpan is used, after disposing of excreta from it, the bedpan should be cleaned with a neutral detergent and water, disinfected with a 0.5% chlorine solution, and then rinsed with clean water; the rinse water should be disposed of in a drain or a toilet or latrine. Other effective disinfectants include commercially available quaternary ammonium compounds, such as cetylpyridinium chloride, used according to manufacturer's instructions, and peracetic or peroxyacetic acid at concentrations of 500–2000 mg/L.

49. Chlorine is ineffective for disinfecting media containing large amounts of solid and dissolved organic matter. Therefore, there is limited benefit to adding chlorine solution to fresh excreta and it is possible that this may introduce risks associated with splashing.

- *Safely disposing of greywater or water from washing PPE, surfaces and floors.*

50. Current WHO recommendations are to clean utility gloves or heavy duty, reusable plastic aprons with soap and water and then decontaminate them with 0.5% sodium hypochlorite solution after each use. Single-use gloves (nitrile or latex) and gowns should be discarded after each use and not reused; hand hygiene should be performed after PPE is removed. If greywater includes disinfectant used in prior cleaning, it does not need to be chlorinated or treated again. However, it is important that such water is disposed of in drains connected to a septic system or sewer or in a soakaway pit. If greywater is disposed of in a soakaway pit, the pit should be fenced off within the health facility grounds to prevent tampering and to avoid possible exposure in the case of overflow.

ANNEX V. Labor Management Plan (LMP)

1. The Labor Management Plan (LMP) is a living document to be reviewed and updated throughout development and implementation of the Lao COVID-19 project and Additional Financing (AF). The LMP applies to all project workers, irrespective of contracts being full-time, part-time, temporary or casual. This LMP reflect the activities to be financed under the Project as of March 2021.

USE OF LABOR IN THE PROJECT

2. The World Bank ESS2 defines four categories of project workers:

- **Direct workers** - people employed or engaged directly by the Borrower (including the project proponent and the project implementing agencies) to work specifically in relation to the project.
- **Contracted workers** - people employed or engaged through third parties to perform work related to core functions of the project, regardless of location. These could be either international or national workers or volunteers.
- **Primary supply workers** - people employed or engaged by the Borrower's primary suppliers.
- **Community workers** - people employed or engaged in providing community worker, generally voluntarily.
- **Civil Servant**- those employed directly by the Government.

3. The Lao PDR COVID-19 Project is expected to engage a variety of staff and workers listed below. Project Management Unit (PMU) means also the PCO established at DPC of MOH responsible for implementation of Component. For vaccination-related activities, workers include COVID taskforces at the national level, Focal Points in MOH, hospital administrators and medical staff working on vaccination, vaccination teams including Village Health Volunteers (VHV), drivers, warehousing staff and waste management staff, among others. These workers are considered Civil Servants (MOH), Direct and Contracted workers and Supply workers. VHSs are considered Community workers.

Project Component	Estimated Number of Project Workers	Characteristics of Project Workers	Timing of Worker Requirements	Contracted Workers
1. Emergency COVID-19 Response: preparedness and emergency activities including purchasing of goods and services, minor civil works related	Unknown at this stage for the number of civil works	Contractor may be national or international hired to run minor civil works relating to infection prevention, including improvements in safe water and sanitation and in medical waste management and disposal systems	Construction	Direct worker -- Contractor in charge of minor civil work improvements relating to infection prevention

Project Component	Estimated Number of Project Workers	Characteristics of Project Workers	Timing of Worker Requirements	Contracted Workers
<p>to improvements of infection prevention (includer water and sanitation), managing hotline, per diems and accommodation for medical and non-medical personnel involved in case detection, payment of overtime for health workers and contractual staff, food and basic supplies for quarantined populations, purchase of vaccines, vaccine deployment activities (including prioritization and communications), vaccine deployment, waste management, post-surveillance. There are also workers in the supply chain where goods, including the vaccine, are being purchased</p>	<p>Estimated 20 staff at MOH in Vientiane, including 10 senior staff working as focal points and incident managers on the vaccine program.</p> <p>Vaccine deployment Taskforce at Central level</p> <p>Estimated 18 provincial focal points/ supervisors on the vaccine program.</p> <p>Health staff in HCF countrywide</p> <p>488 vaccination teams, including Village Health Volunteers</p>	<p>Likely national workers who may come from Vientiane or different provinces. It is recommended that workers are hired locally to work on the needed improvements to (i) avoid labour influx from other provinces, (ii) reduce the need to set up labour camps.</p> <p>Workers at MOH in PMU, workers managing hotline, health workers who are being paid overtime, medical and non-medical staff who may receive per diems and accommodation. Law enforcement officials or surveillance workers responsible for contact tracing, case detection helping to disseminate project information. Those distributing food and basic supplies to quarantined populations.</p> <p>Staff at MOH working on the vaccination deployment plan.</p>	<p>Construction</p> <p>Throughout project cycle</p> <p>Throughout project cycle</p> <p>Throughout project cycle During vaccination campaign</p> <p>Throughout project cycle</p> <p>Throughout project cycle</p>	<p>Contracted worker –</p> <p>Laborers to work on improvements relating to infection prevention</p> <p>Civil servants – working in MOH or district/ provincial hospitals, law enforcement (if doing surveillance) as well as on supervising and rolling out the vaccination program and Direct worker – consultants or additional staff hired to manage hotline, surveillance, work on case detection, distribute food, transport vaccine, communications strategy, etc. Contracted worker – Could include additional staff hired to work on communications</p>

Project Component	Estimated Number of Project Workers	Characteristics of Project Workers	Timing of Worker Requirements	Contracted Workers
	<p>Estimated total of 2,100 staff working on vaccination including inoculation, warehousing, transport, waste management and overall supervision</p>	<p>Health staff, vaccination teams carrying out the vaccine programs.</p> <p>Drivers, cleaners, and others involved in the delivering, storage and handling of vaccines</p> <p>Staff working in the development of IEC materials and communications strategy</p> <p>Supply chain – providers of goods, including the vaccine</p>		<p>strategy and IEC materials.</p> <p>Community workers – Village Health Volunteers will be highly involved in the vaccine program to help disseminate information</p> <p>Primary supply workers</p>
<p>2. Strengthening System for Emergency Response: supports laboratory, isolation and case management capacity of health facilities, including medical supplies, minor civil works on upgrading isolation centers/ treatment rooms in existing health facilities, civil works on construction new HCFs, training medical lab technicians and health personnel at</p>	<p>Unknown at this stage</p>	<p>Contractor may be national or international hired to run minor civil works related to isolation/ treatment centers</p>	<p>Construction</p>	<p>Direct worker -- Contractor in charge of minor civil work improvements relating to infection prevention</p>
	<p>Unknown at this stage</p>	<p>National workers who may come from Vientiane or different provinces. It is recommended that, where possible, workers are hired locally to work on the needed improvements to (i) avoid labor influx from other provinces, (ii) reduce the need to set up worker’s camps. For construction of three new HCFs, there may be a need for small worker’s camps.</p>	<p>Construction</p>	<p>Contracted worker – Laborers to work on improvements relating to infection prevention and to build new HCFs</p>

Project Component	Estimated Number of Project Workers	Characteristics of Project Workers	Timing of Worker Requirements	Contracted Workers
central and provincial level	Unknown at this stage	Lab technicians and health workers being trained at central and provincial level, as well as those conducting the training	Operations	Civil servants – likely lab technicians and health workers, as well as MOH staff conducting training and/or Direct workers hired by MOH to deliver trainings
	Unknown at this stage	Suppliers of construction materials, suppliers of food or services to worker's camps	Construction	Primary supply workers
3. Project Management and Monitoring & Evaluation: including PMU, procurement, safeguards, monitoring, costs for consultants, etc.	Estimated at 20 staff at MOH	Workers at MOH in Vientiane, specifically in the PMU. National or international consultants hired to assist the project.	Throughout project cycle	Civil servants or Direct workers – those working at MOH or consultants hired
4. Strengthening Preparedness for Health Emergency	Unknown at this stage	National and/or international consultants hired to assist the project.	Throughout project cycle	Civil servants or Direct workers – those working at MOH or consultants hired

4. The Project will ensure that no workers of any type is under 18 years.

II. ASSESSMENT OF KEY POTENTIAL LABOR RISKS

5. People engaged to work in the Lao COVID-19 project may come into contact with hazardous wastes and people diagnosed with COVID-19 as well as to the virus via the vaccine vials. It is therefore extremely important that all project workers that are in direct contact with patients and/or medical or any other hazardous waste, or vaccine vials, follow strict protocols as recommended by the World Health Organization (WHO) and Occupational Health and Safety (OHS) measures highlighted in the ESMF. There are also some general construction-

related risks linked to the upgrading or retrofitting of isolation/treatment centers and the construction of new HCFs and minor civil works improvements in water management, water and sanitation.

Project Activity	Key Labor Risks
General project administration and implementation (hiring of consultants, monitoring and reporting, financial management, audits, ESS management, project coordination, conducting behaviour and communication campaigns, conducting trainings, M&E)	<ul style="list-style-type: none"> • Road travel to provinces (OHS) • Sedentary work (OHS) • Exposure to people who could have COVID-19 without the proper PPE and/or training
COVID-19 vaccine deployment and vaccination campaign	<ul style="list-style-type: none"> • Risks from exposure to vaccination generated wastes • Risks from exposure with vaccine receivers without the proper PPE. • Risks of discrimination from people in community • Risk of COVID spread • Road travel to provinces (OHS) • Risk of GBV/SH
Minor civil works and/or construction works to upgrade or retrofit health centers, or new construction of HCFs or improvements to waste management, water and sanitation	<ul style="list-style-type: none"> • Terms and conditions of employment are not consistent with WB ESF 2 (see more info in section below) • Non-discrimination and equal opportunity is not consistent with WB ESF 2 (see more info in section below) • Child labor • Risks of workplace accidents, particularly when operating construction equipment, when working at height on building construction, and when handling heavy equipment and materials • Risks from exposure to hazardous substances (dust, cement, chemicals used in construction etc.) • Accidents or emergencies (OHS) • Potential employment of migrants or seasonal workers • Sexual Exploitation and Abuse (SEA), GBV and VAC to workers and community • Risk of exposure to COVID-19
Transportation of medical supplies, equipment, vaccines	<ul style="list-style-type: none"> • Traffic hazards (OHS) • Road travel to provinces (OHS) • Risks of accidents when handling heavy equipment • Transportation of equipment and supplies is not expected to be a vector of COVID-19
Transportation of medical waste	<ul style="list-style-type: none"> • Traffic hazards (OHS) • Road travel to/from provinces (OHS) • Risks from exposure to hazardous substances (medical waste, contaminated waste)
Running laboratories, treatment facilities, isolation	<ul style="list-style-type: none"> • Terms and conditions of employment • Non-discrimination and equal opportunity

Project Activity	Key Labor Risks
centers, delivering supplies to people being quarantined, storage, handling, distribution centers of the vaccine, deployment of vaccination campaign, etc. that deal directly with COVID-19 patients and/or their waste, and/or the vaccine	<ul style="list-style-type: none"> • Risks from exposure to hazardous substances (medical waste, contaminated waste) • Risks from exposure with patients without the proper PPE and/or training, or their bodily fluids/waste, that have contracted COVID-19 • SEA, GBV and VAC to workers and community • Risk from exposure to vaccine waste • Risk of non-consent to participate as volunteers in the vaccination team (for Village Health Volunteers)
Conducting contact tracing, case detection and confirmation	<ul style="list-style-type: none"> • Risks from exposure with people that may be positive for COVID-19 • Abuse of power, discrimination, stigma towards community members, SEA, GBV and VAC risks for community members
Training of medical lab technicians or health workers, frontline staff, warehouse and transport staff, vaccination teams	<ul style="list-style-type: none"> • SEA, GBV and VAC to workers and community • Spread of sexually-transmitted diseases • Risk of contact with people with COVID-19 without the proper PPE and/or training or of COVID transmission • Traffic hazards (OHS) • Road travel to provinces (OHS)

III. BRIEF OVERVIEW OF THE LABOR LEGISLATION

6. Lao PDR has national legislation that outlines worker's rights. The Labor Law (2013) is the key document governing the regulatory framework for labor in Lao PDR. The Lao government has ratified five out of eight of the fundamental ILO conventions, including on forced labor, child labor, minimum age, discrimination and equal remuneration³¹. These can be found at the following website:

(https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11200:0::NO::P11200_COUNTRY_ID:103060).

7. The **2013 Labor Law** (Amended) defines non-discrimination in employment and in wages. It establishes the need to abide by at least the government minimum wage. Working hours are limited to 8 hours per day, 6 days a week. However, for work considered hazardous, including exposure to communicable diseases, dangerous materials or chemicals, hours of work must not exceed 6 hours per day, 6 days a week. The law is extensive and covers discrimination in the work place, equal opportunity, gender aspects, labor disputes and collective bargaining, among others. A whole chapter in the Law is dedicated to health and safety in the workplace. The Law covers formal and informal workers but does not apply to government officials, soldiers, police, Lao Front for National Development, and mass organizations.

8. Child labor remains a noticeable gap in the legal framework despite many years of participation in related international programs. The Labor Law defines 12 years old as the

³¹ The fundamental ILO conventions not ratified are: freedom of association, rights to organize, abolition of forced labour.

minimum working age for children, though 12-14 year-old are meant to only engage in certain light jobs, but this is not always closely monitored. Article 102 states that youth employees are prohibited from engaging in work that is unsafe, forced labor, work to pay off debts, human trafficking, and hazardous work. The ESMF details the relevant legislation and a gap analysis with the World Bank ESF. No persons under the age of 18 will be allowed work on any aspect relating to the project and forced or indentured labor of any kind will be prohibited.

9. The Labor Law includes provisions on Occupational Health and Safety (OHS) mostly consistent with ESS2 of the World Bank's Environmental and Social Framework (ESF). Additional measures must also be taken compliant with WHO guidelines on COVID-19, as outlined in this ESMF.

10. In addition, the Law on Civil Servants, 2016 and associated Decree on Code of Conduct for Civil Servants, 2019 also largely consistent with ESS2 and applicable for the project. The Civil Servant Law and Decree on Code of Conduct provide provisions and measures to manage, prevent and address mis-behaviors and misconduct that may be observed among civil servants including health workers and staff. Compliance of these legislations are monitored by Department of Personal and Organization under MOH or concerned ministries and Ministry of Home Affairs (MOHA).

IV. RESPONSIBLE STAFF

11. This section identifies the function and/or individuals/agencies within the Project responsible for oversight mechanisms.

- ***Engagement and Management of Direct Workers.*** The Ministry of Health (MOH) is responsible for engagement of direct workers/contractors and compliance with contract conditions (payment of invoices). The MOH will address all LMP aspects as part of procurement for works (such as transport of medical supplies, minor civil works to refurbish labs or medical facilities, consultancy/technical assistance, etc.) as well as for staff working on the vaccination program. A Project Management Unit (PMU) called the Project Coordination Office (PCO) established in the Department of Planning and Coordination (DPC) of MOH will be responsible for overseeing all aspects of implementation of the Project, including compliance of direct workers and contractors monitoring and evaluation.
- ***Engagement and Management of Sub-Contracted Workers.*** For a civil works contract, the Contractor is responsible for management of their workers or subcontracted workers in accordance with this LMP, which will be supervised by PCO of DPC of MOH with assistance from a team of local consulting firm to be mobilized to complete the detailed design, preparation of bidding and contract documents (BD/CD) and supervision of works implementation including reporting the progress. This includes ensuring compliance with key aspects, in particular those relating to COVID-19 prevention and general OHS.
- ***Labor and Working Conditions.*** For the civil works contract, the Contractors will keep records in accordance with specifications set out in this LMP. PCO of DPC of MOH and/or the World Bank may at any time require records to ensure that labor conditions are met and that prevention mechanisms and other safety issues, general to OHS and specific to COVID-19, are being followed. PCO of DPC of MOH will review records against actuals at a minimum on a monthly basis and can require immediate remedial actions if warranted. A summary of issues and remedial actions

will be included in quarterly reports or six months report to be submitted as agreed with the World Bank. For other workers, particularly in the vaccination program, the PCO will ensure records are kept. For Village Health Volunteers, verbal or written consent to participate in the vaccination program as volunteers will be sought.

- **Training of Workers.** For the civil works contract, the Contractors are required to have a designated health and safety office as per the Labor Law. The contractor must train staff on OHS measures, hygiene practices, precautions against COVID-19, and other aspects of this LMP as appropriate. Contractors must make staff available for any mandatory trainings required by PCO of DPC of MOH, as specified by the contract. Meanwhile MOH must ensure adequate training and materials are provided to direct workers, such as those working on communication materials, screening, transport of vaccines, frontline staff, etc.
- **Addressing Worker Grievances.** For the civil works contract, the MOH and Contractors will be required to implement a Grievance Redress Mechanism (GRM) for workers which responds to the minimum requirements in this LMP and labor dispute under the Labor Law. The MOH will review records on a monthly basis. MOH will keep abreast of GRM complaints, resolutions and reflect in quarterly reports to the World Bank. For non-civil works component, the PCO will keep a grievance redress for workers, including those working on the vaccine program.
- **Occupational, Health and Safety.** For the civil works contract, the Contractors on civil works must designate a minimum of one health and safety representative to ensure day-to-day compliance with specified safety measures and OHS, including on precautions against COVID-19, and record any incidents to MOH on a monthly basis; serious incidents should be reported immediately to MOH, the Labor Administration Agency and the World Bank. Cases of COVID-19, and actions taken, should also be reported immediately. Minor incidents should be reflected in the quarterly reports to the World Bank. Further to enforcing the compliance of environmental and social management, contractors will be responsible and liable for the safety of site equipment, laborers and daily workers attending to the construction site and safety of citizens for each activity/subproject site, as mandatory measures. The PCO will work with departments across MOH to ensure project workers on non-civil works components, including the vaccination program, have access to required training and PPE.

V. POLICIES AND PROCEDURES

12. Most environmental and social impacts of the project resulting from activities directly under the control of contractors will be mitigated directly by the same contractors or those under the control of MOH will be mitigated by MOH staff. As such, the approach is to ensure that contractors, or MOH staff, effectively mitigate project related impacts. MOH will incorporate standardized environmental and social clauses in the tender documentation and contract documents in order for potential bidders to be aware of environmental and social performance requirements that shall be expected from them, are able to reflect that in their bids, and required to implement the clauses for the duration of the contract. In particular, this will be the relevant aspects of the Environment and Social Risks and Mitigation Measures outlined in the **Section 5** of ESMF, which covers all potential risks and mitigation measures relevant to contractors. *MOH will enforce compliance by contractors with these clauses.*

13. As a core contractual requirement, the contractor is required to ensure all documentation related to environmental and social management, including the LMP, is available for inspection at any time by MOH. The contractual arrangements with each project worker must be clearly defined. All environmental and social requirements will be included in the bidding documents and contracts.

14. In addition, MOH will be responsible to ensure that safe messaging around COVID-19 prevention, COVID vaccine and OHS measures are distributed and available to all project staff directly hired/working for MOH, as per provisions in this LMP.

15. Project workers involved in construction/rehabilitation must understand and sign the Individual Code of Conduct (Annex VI) and MOH will aim to disseminate understanding and signing of the codes of conduct throughout as much project staff as possible.

(a) Occupational Health and Safety (OHS)

16. All Project workers should receive training on OHS as well as COVID-19 prevention, social distancing measures, hand hygiene, cough etiquette and relations with local community (see technical guidance provided in Annex IV of ESMF) and COVID vaccination protocols as appropriate. For workers working in laboratory and/or HCF, specific training programs should also focus, as needed, on COVID-19 laboratory bio-safety, operation of quarantine and isolation centers and screening posts, measures on contact tracing and case detection, reporting and actions on COVID-19 cases in the workforce, safe handling/storage/distribution of vaccines, immunization protocols, communication and public-awareness strategies, project's labor management procedures, stakeholder engagement, grievance mechanism and compliance monitoring and reporting requirements, including on waste management, among others (see technical guidance provide in Annex IV of ESMF).

17. The Health and Safety specifications will include the following provisions:

- Ensuring workplace health and safety standards in full compliance with Lao PDR law, at a minimum, and including
 - (1) basic safety awareness training to be provided to all persons as well as on COVID-19 prevention and related measures, including protocols for immunization for vaccination teams and other workers, as well as on safe handling, storage and distribution of the vaccine vials;
 - (2) All vehicle drivers to have appropriate licenses;
 - (3) Safe management of the area around operating equipment inside or outside hospitals/laboratories/treatment facilities/isolation centers;
 - (4) Workers to be equipped with hard helmets, safety boots and protective gloves and/or PPE equipment as needed (particularly facemask, gowns, gloves, handwashing soap, and sanitizer) to protect from COVID-19;
 - (5) Secure scaffolding and fixed ladders to be provided for work above ground level;
 - (6) First aid equipment and facilities to be provided in accordance with the Labor Law;
 - (7) At least one supervisory staff trained in safety procedures to be present at all times when construction work is in progress; and

- (8) Adequate provision of hygiene facilities (toilets, hand-washing basins), resting areas etc., separated by gender as needed and with distancing guidelines in place;
- Comply with Lao PDR legislation, WB's ESS2 requirements and other applicable requirements which relate to OHS hazards, including WHO specific COVID-19 guidelines (see Annex VII: OHS Guidelines and COVID-19 Guidelines);
- All workplace health and safety incidents to be properly recorded in a register detailing the type of incident, injury, people affected, time/place and actions taken, including COVID-19 cases in the workforce, which should be reported to MOH and the World Bank immediately;
- All workers (irrespective of contracts being full-time, part-time, temporary or casual) to be covered by insurance against occupational hazards and COVID-19, including ability to access medical care and take paid leave if they need to self-isolate as a result of contracting COVID-19;
- Procedures confirming workers are fit to work, which may include temperature testing and refusing entry to sick workers (with insurance in place to cover payment, as described above);
- All work sites to identify potential hazards and actions to be taken in case of emergency;
- Voluntary vaccination protocols for workers following the National Immunization Law (Article 15);
- Any on-site accommodation/worker's camps to be safe and hygienic, and with distancing guidelines in place, including provision of an adequate supply of potable water, washing facilities, sanitation, accommodation and cooking facilities;
- Workers residing at site accommodation to receive training in preventing prevention of infection through contaminated food and / or water, COVID-19 prevention and avoidance of sexually transmitted diseases;
- Provide laminated signs of relevant safe working procedures in a visible area on work sites, in English and local language as required, including on hand hygiene and cough etiquette, as well as on symptoms of COVID-19 and steps to take if suspect have contracted the virus;
- Fair and non-discriminatory employment practices;
- Provide PPE as suitable to the task and hazards of each worker, without cost to the worker;
- Under no circumstances will contractors, suppliers or sub-contractors engage forced labor or children under the age of 18;
- Construction materials manufactured in Lao PDR be procured only from suppliers able to certify that no forced labour (including debt bondage labour) or child labour (except as permitted by the Labour Law) has been used in production of the materials;
- All employees to be aware of their rights under the Labour Law, including the right to organize;
- All employees to be informed of their rights to submit a grievance through the Project Worker Grievance Mechanism;
- All employees to be provided training on appropriate behaviour with communities, gender-based violence and violence against children (also see Codes of Conduct).

18. Additional guidelines on OHS can be found in Annex III.

(b) Age of Employment

19. For this project, the minimum age will be 18 years. This rule will apply for both national and international workers. Workers will be required to provide proof of their identify and age before commencing any works on site.

(c) Terms and Conditions and Equal Opportunities

20. All terms and conditions as outlined in the World Bank Environmental and Social Framework (ESF) ESS2, paragraphs 10 to 15 apply to contracted workers. In addition,

- In line with national law, the maximum working hours are limited to 8 hours per day, 6 days a week unless there is payment of overtime, or 6 hours a day, 6 days a week if the work is considered hazardous (including exposure to communicable diseases), however this may be amended during a COVID-19 outbreak as prescribed by national directives or legislation.
- Employment opportunities will be available to all. This includes equal pay for equal work, regardless whether the person performing the work is male or female.
- The wages paid by the employers to the workers shall not be lower than the Lao PDR minimum wage.
- All workers to be covered by insurance against occupational hazards and COVID-19, including ability to access medical care and take paid leave if they need to self-isolate as a result of contracting COVID-19.
- Vaccination against COVID-19 to be voluntary for workers following the National Immunization Law (Article 15).

(d) Grievance Mechanism

21. Grievance Redress Mechanism (GRM) for project workers has been established as per the process outlined below. This considers culturally appropriate ways of handling the concerns of direct and contracted workers. Processes for documenting complaints and concerns have been specified, including time commitments to resolve issues.

22. In addition, this GRM was communicated to all relevant stakeholders (such as workers and the community) as part of project engagement and consultation. Special communications will be held with the vulnerable groups identified at each location.

23. All project workers will be informed of the Grievance Mechanism process as part of their contract and induction package.

24. The process for the Worker GRM is as follows:

- The first step is that the Aggrieved Person/Party may report their grievance in person, by phone, text message, mail or email (including anonymously if required) to the Contractor as the initial focal point for information and raising grievances. For complaints that were satisfactorily resolved by the Aggrieved Person/Party or Contractor, the incident and resultant resolution will be logged and reported to the MOH PMU's Focal Point.
- As a second step, where the Aggrieved Person/Party is not satisfied, the Contractor will refer the aggrieved party to the MOH PMU Focal Point. Grievances may also be referred or reported to the MOH PMU Management if deemed suitable. The MOH PMU Focal Point endeavors to address and resolve the complaint and inform the Aggrieved Person/Party as promptly as possible, in particular if the complaint

is related to something urgent that may cause harm or exposure to the person. For complaints that were satisfactorily resolved by the MOH PMU Focal Point, the incident and resultant resolution will be logged by the MOH PMU Focal Point. Where the complaint has not been resolved, the MOH PMU Focal Point will refer to the Manager of the MOH PMU for further action or resolution.

- As a third step, if the matter remains unresolved, or the Aggrieved Person/Party is not satisfied with the outcome, the Manager of the MOH PIUs should refer the matter to Committee for Labor Dispute Resolution, which shall aim to resolve the grievance as per the Labor Law. The MOH Focal Point will log details of issue and resultant resolution status.

25. Up until the third stage there will be no fees for the lodgement of grievances. However, if the complaint remains unresolved or the complainant is dissatisfied with the outcome proposed by the Committee for Labor Dispute Resolution, the Aggrieved Person may refer the matter to the appropriate court, at the complainant's own expense. A decision of the Court will be final. Each grievance record should be allocated a unique number reflecting year and sequence of received complaint (for example 2020-01, 2020-02 etc.). Complaint records (letter, email, record of conversation) should be stored together, electronically or in hard copy. The MOH Focal Point will be responsible for undertaking a regular (at least monthly) review of all grievances to analyze and respond to any common issues arising. The MOH Focal Point is also responsible for oversight of the GRM.

26. For grievances for workers relating to the vaccination program that are not under the management of a contractor, such as for Village Health Volunteers or other health workers, Traditional grievance systems will be in place, with grievances handled at each municipal/provincial referral hospitals and from the village up to national levels through the existing Village Mediation Unit or Committee. These mechanisms will be updated as needed to ensure it is being responsive to needs. The GRM in these instances includes the following steps:

- Step 1: Complainant discusses project-related grievance with the respective central/provincial referral hospitals being supported by the Project or VMU. For instance, a grievance may be related to the upgrading works of the facility, the availability of medical equipment, treatment of patients with COVID-19, performance or conduct of health workers, vaccine schedule, exclusion of Project benefits, etc.
- Step 2: If the Complainant is not satisfied with how the grievance is handled, or if the grievance is not specific to a hospital, the grievance can be raised directly with the PCO and/or hotline.

VI. CONTRACTOR MANAGEMENT

27. The tendering process for contractors will require that contractors can demonstrate their labor management and OHS standards, which will be a factor in the assessment processes.

28. Contractual provisions will require that contractors:

- Monitor, keep records and report on terms and conditions related to labor management, including specific aspects relating to COVID-19;

- Provide workers with evidence of all payments made, including benefits and any valid deductions;
- Ensuring there is a health and safety focal point, responsible for monitoring OHS issues and COVID-19 prevention and any cases of the virus;
- Keep records regarding labor conditions and workers engaged under the Project, including contracts, registry of induction of workers including Code of Conduct, hours worked, remuneration and deductions (including overtime);
- Record safety incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, etc.);
- Report evidence that no child labor or indentured labor is involved;
- Training/induction dates, number of trainees, and topics;
- Insurance for workers against occupational hazards and COVID-19, including ability to access medical care and take paid leave if they need to self-isolate as a result of contracting COVID-19.
- Details of any worker grievances including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken. Grievances listed should include those received since the preceding report and those that were unresolved at the time of that report;
- Sign the Manager's Code of Conduct and/or the Individual Code of Conduct (Annex VI), as applicable.

29. Monitoring and performance management of contractors will be the responsibility of MOH. MOH will be responsible for oversight of labor management provisions as well as contract supervision. The MOH PMU Focal Point (i.e. PCO of DPC) will have overall responsibility for data collection, monitoring, and analysis of the LMP as part of the Project's M&E efforts. The MOH PMU Focal Point will monitor the implementation of, and compliance with, this LMP, including management of worker-related grievances. Monitoring reports should be reviewed and submitted regularly to Manager of the PMU, who will submit with other monitoring reports to the World Bank.

ANNEX VI. Environmental and Social Code of Practice (ESCOP)

1. This Annex presents a generic Environment and Social Code of Practices (ESCOP) comprising an Environment Code of Practice (ECOP) (Part A6.1) and the Social Code of Conduct (SCOC) (Part A6.2). The ESCOP /to be included in civil works contract for small and medium size construction and/or rehabilitation of works related to offices, healthcare services, and isolations rooms/facilities to be implemented under the Lao COVID-19 Response project and its additional financing (LCRP-AF or the Project). The ECOP describes a general and key specific requirement for environmental management and monitoring for physical construction and renovation civil works while scope of SCOC describing obligations of contractor and workers to prevent social impacts during work contract.
2. Both the ECOP and SCOC will be included in the bidding and contract documents (BD/CD) before procurement for contractors and/or before works contract can be signed as agreed with World Bank (WB). The implementation cost for ECOP and SCOC will be part of the works contract cost. The Project Implementing Entity (PIE) will assign a construction supervision consultant and/or field engineer to supervise and monitor contractor's compliance with the ECOP and SCOC on a day-to-day basis and results will be included in the progress report. The PIE, the Provincial/District Offices of Health (PHO/DHO), the related local authorities such as, Provincial/District Department/Division of Natural Resources and Environment (PONRE/DONRE), and/or local communities may also conduct periodic monitoring of contractor performance, as needed. The Project Coordination Office (PCO) of the Department of Planning and Cooperation (DPC), the subproject/activity owner, will ensure that the contractors are compliance with the BD/CD during construction, rehabilitation and/or renovation of civil works.
3. This generic ECOP and SCOC can be modified to suit specific issues/conditions observed/agreed during the preparation of the detailed works design and biding and contract document.
4. The ECOP and SCOC aims to mitigate the possible negative impacts induced by project financed activities. Provision in the ECOP is to address relevant negative impact induced from construction/renovation works such as air pollution, noise, vibration, waste, safety risks, local traffic, etc. which could be mitigated through good housekeeping and construction practices while the SCOC aims to ensure that the contractor pay full attention to the behavior of its staff and workers related to environment, social, health, and safety (ESHS), especially, the occupational health and safety (OHS) as well as other social issues such as gender-based violence (GBV), violence against children (VAC) and other social aspects. The SCOC should also be available for MOH, health staff and subcontractors working in the project. If needed, results from consultation with local authorities and/or local communities should be incorporated into these documents. Key actions during the application of ECOP and SCOC are highlighted below.
 - Incorporate specific actions and/or results from consultation with local authorities and community into the final ECOP and SCOC. After an approval, the PCO and WB team ensure that the final ECOP and SCOC actions are incorporated into the biding and contract documents and ensure that the bidders/contractors are

committed to these obligations and are aware that the implementation cost is part of the construction cost.

- Before works begins, the IA will assign a qualified field staff to responsible for day-to-day supervision and monitoring of contractor performance, include the results of field supervision and possible complaints from local authorities, communities, and/or other stakeholders into the construction progress report. The PIE will also assign staff and/or mobilize consultant, and assign community organizations, mass organization if needed, and/or work with PONRE/DONRE to conduct periodic monitoring of contractor performance of ECOP and SCOC.

A6.1 Scope of ECOP

5. ECOP requirements are divided into 3 parts: (1) General Provision and Planning, (2) Specific Consideration, and (3) Works Management and Monitoring. Part (1) describes roles and responsibility of the IA, contractor, and supervisor including the basic principles and/or requirements of the WB groups for Contractor to consider during the planning or development of a contractor's standard operation procedures (C-SOP). Part (2) describes some specific requirements to address concerns of local authorities and communities, issues observed during supervision and/or site-specific issues. Part (3) describes standard requirements during execution works to reduce potential impacts on air, noise, vibration, water, etc. including key monitoring indicators that could facilitate effective supervision and monitoring including a simple application for small physical renovation civil works (such as renovation of office and other healthcare facility).
6. The following guidelines will be implemented by Contractor as part of the works contract.

Part (1): General Provision and Planning

Section (1.1) Contractor responsibility

7. The Contractor is responsible for making best effort to reduce and mitigate the potential negative impacts on local environment and local resident including making payment for all damages that may occur. Contractor performance will be closely supervised and monitored by a qualified field engineer as well as periodic monitored by a qualified consultant, mass organizations, or local communities to be assigned by the PIE. Compliance with ECOP is required throughout the work period.
8. For clarity, the term "works" and/or "construction" in this document includes all site preparation, demolition, spoil disposal, materials and waste removal and all related engineering and construction activities.

Section (1.2) Non-compliance reporting procedures

9. The Contractor (and its subcontractors if any) must comply with the final ECOP. To ensure that necessary action has been undertaken and that steps to avoid adverse impacts and/or reoccurrence have been implemented, the Contractors must advise the PIE within 24 hours of any serious incidents of non-compliance with the ECOP that may have serious consequence. In the event of working practices being deemed dangerous either by the IA, the local authorities, or the other concerned agencies, immediate remedial action must be taken by the Contractor. The Contractor must keep records of any

incidents and any ameliorative action taken. The records on non-compliance that could be practically addressed (not cause serious impacts) will be reported to the PIE on a monthly basis.

10. The Contractor will be responsible for dealing with any reports/grievance forwarded by the PIE, Police, or other agencies (by following instruction from the PIE's representative as appropriate) as soon as practicable, preferably within one hour but always within 24 hours of receipt by either the Contractor. The CSC/FE will monitor and ensure that the Contractor has taken appropriate action. Where appropriate, approval remedial actions may require an agreement from the local authorities and/or other Government agencies. Procedures should be put in place to ensure, as far as is reasonably practical, that necessary actions can be undertaken to avoid recurrence and/or serious damage.

Section (1.3) Liaising with local authorities and the public

11. Prior to the commencement of project investment activities and throughout the construction duration, the Contractor will work closely with the local authorities and other agencies to ensure full compliance with Government regulations including those related to life and fire safety (L&FS) risk assessment and management and will also provide adequate information on the Project to the general public, especially those that may cause public safety, nuisance, and sensitive areas and the locations of storage and special handling areas. The Contractor will provide information and reporting telephone "Hot Line" staffed at all times during working hours.

Section (1.4) Community relations

12. The Contractor will assign one community-relation personnel, who will be focused on engaging with the community to provide appropriate information and to be the first line of response to resolve issues of concern. Contractor will take reasonable steps to engage with residents of ethnic minority backgrounds and residents with disabilities (or other priority groups as appropriate), who may be differentially affected by construction impacts.
13. The Contractor will ensure that local residents nearby the construction sites will be informed in advance of works taking place, including the estimated duration. In the case of work required in response to an emergency, local residents shall be advised as soon as reasonably practicable that emergency work is taking place. Potentially affected residents will also be notified of the 'Hotline' number, which will operate during working hours. The "Hotline" will be maintained to handle enquiries regarding construction activities from the general public as well as to act as a first point of contact and information in the case of any emergency. All calls will be logged, together with the responses given and the callers' concerns action and a response provided promptly. The Hotline will be widely advertised and displayed on site signboards.
14. The Contractor respond quickly to emergencies, complaints or other contacts made via the 'Hotline' or any other recognized means and liaise closely with the emergency services, local authority officers and other agencies (based on established contacts) who may be involved in incidents or emergency situations.

15. The Contractor will manage the work sites, work camps, and workers in a way that is acceptable to local residents and will not create any social impacts due to workers. Any construction workers, office staff, Contractor's employees, or any other person related to the Project found violating the "*prohibitions*" activities listed in Section (1.7) below may be subject to disciplinary actions that can range from a simple reprimand to termination of his/her employment depending on the seriousness of the violation.

Section (1.5) Implementation of the Environmental Health and Safety (EHS) guideline

16. In line with WB safeguard policy, the Contractor is required to comply with the Environment, Social, Health, and Safety (ESHS) established for the project investment with financial support from the WB group (WBG). The ESHS provides general guidance on the pollution prevention and abatement measures and workplace and community health and safety guidelines that are normally acceptable in Bank-supported projects, particularly in cases where the borrowing country does not have standards, or when its standards fall significantly short of international or industry-wide norms. The ESHS are divided in two parts: general guidelines on health and safety and pollution prevention and abatement, including general standards for air and water quality, and a set of sector-specific guidelines for various types of development projects. For the Project, the Contractor will prepare an ESHS Plan with an aim to identify the potential impacts and to develop a mechanism for a better management of the environmental health and safety of project activities during construction. The ESHS Plan will be incorporated into the C-SOP. At a minimum the following ESHS rules will be strictly followed:

Site ESHS Rules:

- ESHS orientation sessions before starting work;
- Wearing of personal protective equipment (gloves, helmets, safety shoes, dungarees, goggles etc);
- Follow the messages and instructions displayed on EHS notice boards installed on site;
- Promptly reporting all accidents to the concerned authority;
- Maintain appropriate barricades as required;
- Vehicles must be driven at a safe speed, observing speed limits of 30 Km/h and designated routes as mentioned in Contractor's Mobility Map;
- Drivers must have a valid driving license for the class of vehicle they are operating;
- Vehicles shall only be parked in designated parking areas; and
- Mine clearance of the project investment area.

Health and Hygiene: The measures should include:

- Provision of adequate medical facilities to the staff;
- Provision of hygienic food to the employees;
- Provision of cooling and heating facilities to the staff;
- Provision of drainage, sewerage and septic tanks in camp area;
- Provision of handwashing or hand sanitizing facilities;

- Compliance with COVID-19 measures in-country.

Security: Security measures should include:

- Regular attendance and a controlled time keeping of all employees;
- Restriction of un-authorized persons to the residential and work areas;
- Restriction of carrying weapons and control hunting by employees; and
- Provision of boundary walls/ fences with proper exits to the camp.

Section (1.6) Implementation of “Chance Find” Procedures

17. If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor will carry out the following steps:
- 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 project engineer, supervisor, and/or the project owner (PCO/DPC and/or PHO) who in turn will notify the responsible local authorities and the provincial Culture Department immediately (within 24 hours or less);
 - Responsible local authorities and the provincial Culture Department 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 the provincial Culture Department. 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 the provincial Culture Department concerning safeguard of the heritage.

Section (1.7) Prohibitions

18. The following activities are prohibited on or near the activity/subproject sites:
- Cutting of trees for any reason outside the approved construction area; Hunting, fishing, wildlife capture, or plant collection; Buying of wild animals for food; Having caged wild animals (especially birds) in camps; Poaching of any description; Explosive and chemical fishing; Disturbance to anything with architectural or historical value;

- Building of fires; Use of unapproved toxic materials, including lead-based paints, asbestos, etc.; Use of firearms (except authorized security guards); Use of alcohol by workers in office hours; Driving in an unsafe manner in local roads; and
19. Washing cars or machinery in streams or creeks; Maintenance (change of oils and filters) of cars and equipment outside authorized areas; Creating nuisances and disturbances in or near communities; Disposing garbage in unauthorized places; Indiscriminate disposal of rubbish or construction wastes; Littering the site; Spillage of potential pollutants, such as petroleum products; Collection of firewood; Urinating or defecating outside the designated facilities; and Burning of wastes and/or cleared vegetation.

Part (2) Specific Requirements

20. To be responsive to concerns observed and/or expressed by local authorities and communities, the Contractor will be responsible to comply with, but not limited to, the followings:
- The Contractor will install the Work Camp on areas far enough from water points, houses and sensitive areas in consultation with the community and the PIE. Good quality sanitary equipment should be selected and installed in the Work Camp.
 - The Contractor will manage all activities in compliance with GOL laws, rules and other permits related to site construction regulations (what is allowed and not allowed on work sites), and will protect public properties. Degradation and demolition of private properties will be avoided. Paying compensation to damage to the public facilities and/or private property will be required. The Contractor will inform the IA on issue and/or damages that may unexpectedly occur.
 - The Contractor is responsible for protection of local environment against dust, air, noise, vibration, exhaust fuels and oils, and other solid residues generated from the work sites. The Contractor will manage waste properly and do not burn them on site and will also provide proper storage for construction materials, organize parking and displacements of machines in the site. Used oil and construction waste materials must be appropriately disposed-off and adequate waste disposal and sanitation services will be provided at the construction site next to the generated areas. In order to protect soil, surface and ground water the Contractor will avoid any wastewater discharge, oil spill and discharge of any type of pollutants on soils, in surface or ground waters, in sewers and drainage ditches. Compensation measures may be required.
 - The Contractor will be responsible for maintaining good hygiene, safety, and security of the work sites, including protection of and health and safety of staff and workers. The Contractor will prevent standing water in open construction pits, quarries or fill areas to avoid potential contamination of the water table and the development of a habitat for disease-carrying vectors and insects. Safe and sustainable construction materials and construction method should be used.
 - The Contractor will comply with COVID-19 measures as determined by authorities.

- The Contractor will use a quarry of materials according to the regulations and compensate by planting of trees in case of deforestation or tree felling. When possible, the Contractor should develop maintenance and reclamation plans, protect soil surfaces during construction and re-vegetate or physically stabilize eligible surfaces, preserve existing fauna and flora and preserve natural habitats along streams, steep slopes, and ecologically sensitive areas.
 - During construction, the Contractor will take serious actions to control dust by using water or through other means and the construction site will be cleaned on a daily basis.
 - The Contractor will work with local authority and management local traffic effectively and ensure traffic access of road safety of local residents and road users during the works. Speed limit at work sites and community area will be applied to all vehicles and cars. All vehicles and their drivers must be identified and registered and the drivers are properly trained.
 - The Contractor will install signs and signals of works, ensure no blockage of access to households during construction and/or provide alternative access, provide footbridges and access of neighbours and endure construction of proper drainage on the site.
 - The Contractor will respect the cultural sites, ensure security and privacy of women and households in close proximity to the camps and safely dispose asbestos.
21. To protect COVID-19 impacts on workforce, the measures provided in Box A6.1 will be applied as appropriate taking into account the Government procedures and regulations and/or agreements with local authority and/or the WB.

Box A6.1. Guideline to prevent risk due to COVID-19 outbreak

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| <ul style="list-style-type: none"> • Develop a contingency plan for work force in line with the guideline provided under the WBG's response to COVID19 on development of contingency plan for workforce [including an arrangement for accommodation, care and treatment for: (a) Workers self-isolating; (b) Workers displaying symptoms; and (c) Getting adequate supplies of water, food and supplies. • The guidelines also require that (i) the Contingency plans will consider arrangements for the storage and disposal arrangements for medical waste, which may increase in volume and which can remain infectious for several days (depending upon the material); (ii) Ensure medical facilities are stocked with adequate supplies of medical PPE, as a minimum: (a) Gowns, aprons; (b) Medical masks and some respirators (N95 or FFP2); (c) Gloves (medical, and heavy duty for cleaners); and (d) Eye protection (goggles or face screens); (iii) Medical staff at the facilities will be trained and be kept up to date on WHO advice and recommendations on the specifics of COVID-19; and (iv) The medical staff/management will run awareness campaigns and posters on site advising workers: (a) how to avoid disease spread (cough/sneeze in crook of elbow; keep 1m or more away, sneeze/cough in tissue and immediately through tissue away, avoid spitting, observe good hygiene); (b) the need to regularly wash hands with soap and water – many times per day; (c) to self-isolate if they think they may have come in contact with the virus; and (d) to self-isolate if they start to display any symptoms, but alert and seek medical advice; (v) Wash stations e provided regularly throughout site, with a supply of clean water, liquid soap and paper towels (for hand drying), with a waste bin (for used paper towels) that is regularly emptied; and (vi) Wash stations should be provided wherever there is a toilet, canteen/food and drinking water, or sleeping accommodation, at waste stations, at stores and at communal facilities. Where wash stations cannot be provided (for example at remote locations), alcohol-based hand rub should be provided. |
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- Enhanced cleaning arrangements should be put in place, to include regular and deep cleaning using disinfectant of catering facilities/canteens/food/drink facilities, latrines/ toilets/showers, communal areas, including door handles, floors and all surfaces that are touched regularly (ensure cleaning staff have adequate PPE when cleaning consultation rooms and facilities used to treat infected patients)
- Worker accommodation that meets or exceeds IFC/EBRD worker accommodation requirements (e.g. in terms of floor type, proximity/no of workers, no ‘hot bedding’, drinking water, washing, bathroom facilities etc.) will be in good state for keeping clean and hygienic, and for cleaning to minimize spread of infection.
- To minimize pressure on PPE resources: WHO advice on the effectiveness and use of PPE by general public should be followed to ensure that the supplies are not exhausted through ineffective use – this is equally important on construction sites.
- Other measures (such as working water sprinkling systems at crushers and stock piles, covered wagons, water suppression or surfacing of haul roads etc.) should be used for dust suppression on site before relying upon the use of dust masks (which could unnecessarily reduce the availability of N95/FFP2 masks for use by medical staff performing some duties)

Part (3) Works Management and Monitoring

22. This section provides an example for typical measures for physical works. However, given that the impacts and mitigation measures are varied according to nature and size of works, two guidance is provided. For the Project rehabilitation works expected to create moderate or substantial risks, the procedure in (3a) will be applied and monitored. However, for very small works such as renovation of small office, the procedures in (3b) can be followed. Contractor’s performance during implementation of works will be supervised and monitored by the CSC/FE. The contract final requirements should be consistent with the final detailed design.

(3a) Management and Monitoring of Project Works

#	Activities causing impacts	Mitigation measures	Monitoring indicators
1	Establishment and operation of worker camps,	<ul style="list-style-type: none"> • Ensure that the sites for campsite are approved by the Project and local authority; Selection of the camp sites should be made through tripartite consultation including community, Contractor, and the activity/subproject representative. • Ensure that basic camp facilities are provided including security, septic tanks, latrines, safe water supply, mosquito net, blanket, safe paths, fire prevention equipment, etc. • Ensure that camp facilities comply with COVID guidelines on physical distancing, etc. • Ensure that (a) washing areas, demarcated and water from washing areas and kitchen is released in sumps, (b) septic tanks of appropriate design have been used for sewage treatment and outlets are released into sumps and must not create a pond of stagnant water, and (c) the latrines, septic tanks, and sumps are built at a safe 	<p>Location of the work camp should be shown in the alignment sheet.</p> <p>No complaints from local authorities and local residents due to location and activities of the worker camps.</p> <p>Safe and comfortable living of staff and workers</p>

#	Activities causing impacts	Mitigation measures	Monitoring indicators
		distance from water body, stream, or dry streambed, and the sump bottom is above the groundwater level.	
2	Establishment and operation of construction materials and equipment yards and access roads	<ul style="list-style-type: none"> Ensure that the locations are far away from residential areas and take actions to mitigate dust, noise, vibration, water pollution, waste, etc. 	Proper management of the site and no complaints from local authorities and residents
3	Disposal of waste generated from the camp	<ul style="list-style-type: none"> Recycle metallic, glass waste; bury organic waste in impervious pit covered with soil. Ensure that waste material is properly disposed off in a manner that does not affect the natural drainage. 	No health issue occurred
4	Access tracks/haulage routs	<ul style="list-style-type: none"> The moving machinery should remain within the activity/subproject boundary. Ensure that the access tracks, which are prone to dust emissions and disturbance to local resident are managed by water spraying daily and the areas sensitive to noise and vibration are managed through enforcement of speed limit control. After completion of construction work all the damaged roads / tracks will be restored by the Contractor, as it is Contractor's obligations. Ensure that surface run-off controls are installed and maintained to minimize erosion. Restriction on movement of Contractor's vehicles on designation routes; deploy traffic man at the village to control the traffic as needed. 	No complaints from local residents regarding dust, noise, vibration, road safety, and the usage of the tracks/access roads
5	Hiring skilled workers from outside of the locality	<ul style="list-style-type: none"> Hiring of workers from the local communities as much as possible. 	Number of local workers at the worksite.
6	Workers safety and hygienic conditions	<ul style="list-style-type: none"> Provide protective clothing and equipment for workers especially those handling hazardous materials, (helmets, adequate footwear) for concrete works (long boots, gloves), for welders (protective screen, gloves dungaree), etc. Provide PPE for COVID prevention as needed following local guidelines. Provide handwashing and/or hand sanitizing facilities. 	Safe working conditions
7	Water for staff and workers consumption and construction	<ul style="list-style-type: none"> Provide adequate and safe water for consumption at sites and work camp. 	Water tanker and pump by the Contractor

#	Activities causing impacts	Mitigation measures	Monitoring indicators
8	Interruption of water supply	<ul style="list-style-type: none"> Inform residents and provide water supply as needed. 	No complaint from residents
9	Social issues	<ul style="list-style-type: none"> Ensure that conflicts with local power holders and local communities are avoided. Ensure that focus group meetings are conducted with both men and women to identify any water related and other issues related to the activity/subproject implementation. Ensure that physical distancing measures are followed. Ensure that workers understand and sign Codes of Conduct 	No social conflicts due to the activity/subproject activities and/or workers.
10	Storage of hazardous material (including infectious and toxic wastes)	<ul style="list-style-type: none"> Provide hard compacted, impervious and bounded flooring to hazardous material storage areas; Label each container indicating what is stored within; Train staff in safe handling techniques. 	No health hazard and water contamination occurred.
11	Construction activities; handling of fuels, oil spill and lubricants	<ul style="list-style-type: none"> Ensure that no contaminated effluent is released in to the environment. Ensure that fuels, oils, and other hazardous substances handled and stored according to standard safety practices such as secondary containment. Fuel tanks should be labeled and stored in impervious lining and dykes etc. Ensure that vehicle refueling to be planned on need basis to minimize travel and chance spills. Ensure that operating vehicles are checked regularly for any fuel, oil, or battery fluid leakage. 	No oil spill observed
12	Cutting of trees in the construction area where required	<ul style="list-style-type: none"> To minimise the needs for cutting. To get agreement of the local community and community 	No complaints from local authority and/or residents.
13	Excavation of channels	<ul style="list-style-type: none"> Proper compaction and water sprinkling 	Erosion and dust emission minimized
14	Disposal of excavated material	<ul style="list-style-type: none"> Stockpile the excavated material to non-agriculture and in a minimum area and away from storm water 	Minimum loss of habitat
15	Loss of fertile soil and vegetation; impacts on natural	<ul style="list-style-type: none"> Remove surface soil of the location, stocked in a proper place and once the construction is finished, put the soil back on that place. The left over spoil soil should be collected and kept aside 	River banks stabilized and re-vegetated

#	Activities causing impacts	Mitigation measures	Monitoring indicators
	vegetation and embankment erosion along the watercourse.	for rehabilitation of the site at later stage of the work; re-vegetate the embankments with indigenous plant species	
16	Dust and smoke emissions	<ul style="list-style-type: none"> All truckloads of loose materials is covered during transportation. Water spraying or any other methods are used by the Contractor to maintain the works areas, adjacent areas, and roads, in a dustless condition, as well the vehicle speed not to be exceeded from 30Km/h. Vehicles will be tuned regularly to minimize the smoke emissions. 	Dust and smoke controlled
17	Noise pollution	<ul style="list-style-type: none"> Vehicles and equipment used to be fitted, as applicable, and with properly maintained silencers. Restriction on loudly playing radio/tape recorders etc. 	Excessive noise generation controlled
18	Excavation of borrow areas	<ul style="list-style-type: none"> Excavate borrow soil up to maximum depth of 0.5m; with slope boundaries 	Borrow area rehabilitated as per specification
19	Rehabilitation of borrow pits	<ul style="list-style-type: none"> Proper rehabilitation of borrow pits; Removal and storage of top 15 cm top soil having organic materials and spreading it back during restoration of borrow area 	Borrow areas rehabilitated
20	Encountering archaeological sites during earth works	<ul style="list-style-type: none"> The activity/subproject field supervisor (CSC or filed engineer) will halt the work at the site and inform to the regional team leader and Archaeological Department immediately. 	The report from the CSC or field supervisor, community, and contractor
21	Aesthetic/ scenic quality	<ul style="list-style-type: none"> Carry out complete restoration of the construction sites. Remove all waste, debris, unused construction material, and spoil from the worksites. 	Cleanliness and tidiness of works sites and work camp

(3b) Management of Small Renovation of Offices

Do:	Do not
<ul style="list-style-type: none"> ◆ Use the toilet facilities provided – report dirty or full facilities ◆ Clear your work areas of litter and building rubbish at the end of each day – use the waste bins provided and ensure that litter will not blow away. ◆ Report all fuel or oil spills immediately & stop the spill from continuing. 	<ul style="list-style-type: none"> ◆ Remove or damage vegetation without direct instruction. ◆ Make any fires. ◆ Poach, injure, trap, feed or harm any animals – this includes birds, frogs, snakes, etc. ◆ Enter any fenced off or marked area. ◆ Drive recklessly or above speed limit ◆ Allow waste, litter, oils or foreign materials into the stream; ◆ Litter or leave food lying around;

<ul style="list-style-type: none"> ◆ Smoke in designated areas only and dispose of cigarettes and matches carefully. (littering is an offence.) ◆ Confine work and storage of equipment to within the immediate work area. ◆ Use all safety equipment and comply with all safety procedures. ◆ Prevent contamination or pollution of streams and water channels. ◆ Ensure a working fire extinguisher is immediately at hand if any “hot work” is undertaken e.g. welding, grinding, gas cutting etc. ◆ Report any injury of workers or animals. ◆ Drive on designated routes only, observe speed limit, and prohibit drunken driving. ◆ Prevent excessive dust and noise. ◆ Prevent bad behaviors of works especially those related to sexual exploitation, gender-based violence (GBV), violence against children (VAC), and other abuses 	<ul style="list-style-type: none"> ◆ Cut trees for any reason outside the approved construction area; ◆ Buy any wild animals for food; ◆ Use unapproved toxic materials, including lead-based paints, asbestos, etc.; ◆ Disturb anything with architectural or historical value; ◆ Use of firearms (except authorized security guards); ◆ Use of alcohol by workers during work hours; ◆ Wash cars or machinery in streams or creek; ◆ Do any maintenance (change of oils and filters) of cars and equipment outside authorized areas; ◆ Dispose trash in unauthorized places; ◆ Have caged wild animals (especially birds) in camps; ◆ Work without safety equipment (including boots and helmets); ◆ Create nuisances and disturbances in or near communities; ◆ Use rivers and streams for washing clothes; ◆ Dispose indiscriminately rubbish or construction wastes or rubble; ◆ Spill potential pollutants, such as petroleum products; ◆ Collect firewood; ◆ Do explosive and chemical fishing; ◆ Use latrines outside the designated facilities; and ◆ Burn wastes and/or cleared vegetation.
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Section A6.2 Scope of SCOC

Instructions:

23. This Social Code of Conduct (SCOC) should be included in bidding documents for the civil works contractor(s) and in their contracts once hired.

Manager’s Code of Conduct

24. The contractor is committed to ensuring that the project is implemented in such a way which minimizes any negative impacts on the local environment, communities, and its workers. This will be done by respecting the environmental, social, health and safety (ESHS) standards, and ensuring appropriate occupational health and safety (OHS) standards are met. The contractor is also committed to creating and maintaining an environment where children under the age of 18 will be protected, and where sexual abuse and sexual harassment have no place. Improper actions towards children, Violence Against Children (VAC), sexual abuse/harassment, and/or acts of Gender Based Violence (GBV) will not be tolerated by any employee, sub-contractors, supplier, associate, or representative of the company.
25. Staff at all levels have a responsibility to uphold the contractor’s commitment. Contractors need to support and promote the implementation of the SCOC. To that end, staff must adhere to this SCOC and also to sign the Individual Code of Conduct (ICOC).

Implementation

26. As follows:

- a. To ensure maximum effectiveness of the SCOC:
 - (i) Prominently displaying the SCOC in clear view at workers' camps, offices, and in public areas of the workspace. Examples of areas include waiting, rest and lobby areas of sites, canteen areas and health clinics.
 - (ii) Ensuring all posted and distributed copies of the SCOC are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.
- b. Verbally and in writing explain the SCOC to all staff, including in an initial training session.
- c. Ensure that:
 - (i) All staff sign the 'Individual Code of Conduct', including acknowledgment that they have read and agree with the SCOC.
 - (ii) Staff lists and signed copies of the Individual Code of Conduct are provided to the OHS Manager and the MOH Focal Point.
 - (iii) Participate in training and ensure that staff also participate as outlined below.
 - (iv) Put in place a mechanism for staff to:
 - report concerns on ESHS or OHS compliance; and,
 - confidentially report GBV incidents through the Grievance Redress Mechanism (GRM)
 - (v) Staff are encouraged to report suspected or actual ESHS, OHS, GBV, VAC issues, emphasizing the staff's responsibility in compliance with applicable laws and to the best of your abilities, prevent perpetrators of sexual exploitation and abuse from being hired, re-hired or deployed. Use background and criminal reference checks for all employees nor ordinarily resident in the country where the works are taking place.
- d. Ensure that when engaging in partnership, sub-contractor, supplier or similar agreements, these agreements:
 - (i) Incorporate the ESHS, OHS, GBV, VAC Codes of Conduct as an attachment.
 - (ii) Include the appropriate language requiring such contracting entities and individuals, and their employees and volunteers, to comply with the Individual Codes of Conduct.
 - (iii) Expressly state that the failure of those entities or individuals, as appropriate, to ensure compliance with the ESHS and OHS standards, take preventive measures against GBV and VAC, to investigate allegations thereof, or to take corrective actions when GBV or VAC has occurred, shall not only constitute grounds for sanctions and penalties in accordance with the Individual Codes of Conduct but also termination of agreements to work on or supply the project.
- e. Provide support and resources to create and disseminate staff training and awareness-raising strategy on GBV, VAC and other issues highlighted in the ESMF.
- f. Ensure that any GBV or VAC complaint warranting Police action is reported to the Police, MOH and the World Bank immediately.
- g. Report and act in accordance with the agreed response protocol any suspected or actual acts of GBV or VAC.

- h. Ensure that any major ESHS or OHS incidents are reported to MOH and the supervision engineer immediately, non-major issues in accordance with the agreed reporting protocol.
- i. Ensure that children under the age of 18 are not present at the construction site, engaged in any hazardous activities or otherwise employed.

Training

- j. The managers are responsible to:
 - (i) Ensure that staff have a suitable understanding of the ESMF, in particular OHS aspects and COVID-19 prevention, as well as GBV and VAC and are trained as appropriate.

Response

- k. Managers will be required to take appropriate actions to address any ESHS or OHS incidents.
- l. Regarding GBV:
 - (i) Maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of GBV (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).
 - (ii) If a manager develops concerns or suspicions regarding any form of GBV by one of his/her direct reports, or by an employee working for another contractor on the same work site, s/he is required to report the case using the GRM.
 - (iii) Once a sanction has been determined by the GRM, the relevant manager(s) is/are expected to be personally responsible for ensuring that the measure is effectively enforced, within a maximum timeframe of 14 days from the date on which the decision to sanction was made by the GRM.
 - (iv) If a Manager has a conflict of interest due to personal or familial relationships with the survivor and/or perpetrator, he/she must notify the Company and the GRM. The Company will be required to appoint another manager without a conflict of interest to respond to complaints.
 - (v) Ensure that any GBV issue warranting Police action is reported to the Police, MOH and the World Bank immediately.
- m. Managers failing address ESHS or OHS incidents or failing to report or comply with the GBV provisions may be subject to disciplinary measures, to be determined and enacted by the Company. Those measures may include:
 - (i) Informal warning;
 - (ii) Formal warning;
 - (iii) Additional Training;
 - (iv) Loss of up to one week's salary;
 - (v) Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months;
 - (vi) Termination of employment.
- n. Ultimately, failure to effectively respond to ESHS, OHS, VAC and GBV cases on the work site by the company's managers may provide grounds for legal actions by authorities.

I do hereby acknowledge that I have read the Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, VAC and GBV requirements. I understand that any action inconsistent with this Code of Conduct or failure to act mandated by this Code of Conduct may result in disciplinary action.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Individual Code of Conduct (ICOC)

27. As follows:

Instructions: This Individual Code of Conduct should be included in bidding documents for the civil works contractor(s) and in their contracts once hired.

I, _____, acknowledge that adhering to environmental, social, health and safety (ESHS) standards, following the project’s occupational health and safety (OHS) requirements, and preventing Violence Against Children (VAC) and Gender Based Violence (GBV) is important.

The Contractor considers that failure to follow ESHS and OHS standards, or to partake in activities constituting VAC or GBV—be it on the work site, the work site surroundings, at workers’ camps, or the surrounding communities—constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution by the Police of those who commit GBV or VAC may be pursued if appropriate.

I agree that while working on the project I will:

- a. Consent to a background check in any place I have worked for more than six months.
- b. Attend and actively partake in training courses related to ESHS, OHS, COVID-19 prevention, VAC and GBV as requested by my employer.
- c. Will wear my personal protective equipment (PPE) at all times when at the work site or engaged in project related activities, in particular if related to exposure to COVID-19.
- d. Will follow all prevention measures relating to COVID-19, including (i) washing hands with water and soap before and after eating, when entering my work area, after sneezing/coughing, etc; (ii) sneeze or cough on elbow and/or wash hands after sneezing/coughing; (iii) if feeling unwell or have symptoms of a cold, flu or any respiratory illness, inform manager immediately, stay at home and do not come to work.
- e. Take all practical steps to implement the environmental and social management framework (ESMF).

- f. Implement OHS measures.
- g. Adhere to a zero-alcohol policy during work activities, and refrain from the use of narcotics or other substances which can impair faculties at all times.
- h. Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- i. Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- j. Not sexually exploit or abuse project beneficiaries and members of the surrounding communities.
- k. Not engage in sexual harassment of work personnel and staff—for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature is prohibited: i.e. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; in some instances, giving personal gifts.
- l. Not engage in sexual favors—for instance, making promises of favorable treatment (i.e. promotion), threats of unfavorable treatment (i.e. loss of job) or payments in kind or in cash, dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.
- m. Not use prostitution in any form at any time.
- n. Not participate in sexual contact or activity with children under the age of 18—including grooming or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.
- o. Unless there is the full consent³² by all parties involved, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex (including prostitution). Such sexual activity is considered “non-consensual” within the scope of this Code.
- p. Consider reporting through the GRM or to my manager any suspected or actual GBV by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.

With respect to children under the age of 18:

- q. Bring to the attention of my manager the presence of any children on the construction site or engaged in hazardous activities.
- r. Wherever possible, ensure that another adult is present when working in the proximity of children.
- s. Not invite unaccompanied children unrelated to my family into my home, unless they are at immediate risk of injury or in physical danger.

³² **Consent** is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

- t. Not use any computers, mobile phones, video and digital cameras or any other medium to exploit or harass children or to access child pornography.
- u. Refrain from physical punishment or discipline of children.
- v. No hiring of children for any project activity (no persons under the age of 18).

Sanctions

I understand that if I breach this Individual Code of Conduct, my employer will take disciplinary action which could include:

- w. Informal warning;
- x. Formal warning;
- y. Additional Training;
- z. Loss of up to one week's salary;
- aa. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months;
- bb. Termination of employment;
- cc. Report to the Police if warranted.

I understand that it is my responsibility to ensure that the environmental, social, health and safety standards are met. That I will adhere to the occupational health and safety management plan. That I will avoid actions or behaviors that could be construed as VAC or GBV. Any such actions will be a breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, VAC and GBV issues. I understand that any action inconsistent with this Individual Code of Conduct or failure to act mandated by this Individual Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

ANNEX VII. Resource List: COVID-19 Guidance

1. There are many laws, regulations, and guidelines to be considered during the planning and implementation of the Project. This annex provides information on the key ones comprising: (7.1) GOL legislations and guidelines to be applied to the Project and (7.2) WHO, the WB group (WBG), and other international agencies related to COVID-19. *Given the COVID-19 situation is rapidly evolving, a version of this resource list will be regularly updated and made available on the World Bank COVID-19 operations intranet page (<http://covidoperations/>).*

7.1 List of GOL Laws, Regulations, and Guidelines

2. On environmental and social study required by MONRE, the key ones are Environmental Protection Law (EPL, 1999, 2012), Environmental Impact Assessment Decree (2019), type of project/activities that require IEE or EIA (2013) and being updated, regulations on processing of IEE and ESIA process, for all investment projects and technical guidelines on preparation of ESIA and IEE report. On pollution control and waste management, under the 2012 EPL, there are regulations on hazardous waste management (2015) and national environmental quality standards and emission control standards (2017). New regulations and/or guidelines related to pollution control, waste management, and toxic chemicals and hazardous substances are being updated.

3. MONRE and provincial and local agencies responsible for natural resources and environment (PONRE/DONRE, Vientiane Capital, and Cities/Municipalities) are the lead ministry/agencies responsible for management of water resources, EIA/IEE processes, and pollution control and waste management. However other sector ministries³³ and their provincial and districts offices (including Vientiane capitals and other cities) have also issued regulations and/or guidelines (under other laws) related to pollution control, waste management, health, and safety. Nonetheless, implementation of these laws, regulations, and/or guidelines are ineffective due to limited budget and human resources.

4. Lao PDR is also a member of the 1989 Basel Convention on Transboundary Movements of Hazardous Wastes and their Disposal (effective in May 1992) as well as the 2001 Stockholm Convention on Persistent Organic Pollutants (POPs) (effective in May 2004), and the 2013 Minamata Convention on Mercury (effective in 2017) aiming to control the use and disposal of mercury and mercury compound.

5. ***On Public Health Sector.*** Key ones are Law on Health Care (LOHC) (No. 58/NA, dated 24 December 2014); Law on Health Care, approved by the National Assembly on 22 January 2015; Law on Prevention and Control of Communicable Disease, approved by the National Assembly on 19 December 2017; Law on Preventive Vaccination (immunization) approved by the National Assembly on 09 August 2018. The 2014 LOHC describes the principles, regulations and different measures relating to the organization, activities, management and control of health care activities, in order to ensuring that all citizens, societies and communities have access to equal, full, equitable and quality health care services while protecting the rights and interests of health care professional. According to LOHC, the healthcare administrative agencies consist of (1) the MOH at the National level; (2) the PHO at the provincial level, and (3) DHO at the district level. There is also a health center (small hospital) established at the cluster (Khum Ban) level and dispensary in some villages.

6. Some regulations and guidelines issued by MOH for implementation of health care specific issues include (b) Decision on Healthcare Waste Management (No. 1373, dated 23

³³ Such as Ministry of Public Health (MOH), Ministry of Industries and Commerce (MOIC), Ministry of Public Works and Transport (MPWT), Ministry of Labor and Social Welfare (MLSW), Ministry of Energy and Mines (MEM), and Ministry of Planning and Investment (MPI).

November, 2017), (c) Decision on hygiene condition of healthcare facilities (No. 1667, dated 15 August 2018); Decision on hygiene standards for healthcare facilities, prepared by DHHP, Decision #1667, dated 15 August, 2018; Decision on solid waste management for healthcare facilities, printed by DHHP, Decision #1373, dated, 2017. Key guidelines are Sharp Waste Management Guidelines, issued by the Director General of the Department of Planning and Coordination (DPC/MOH), dated 10 October 2019; Guideline on Handwashing and Environmental Cleaning; Healthcare Waste Management Guidelines 2011; National Injection Safety Guidelines 2014; Guidelines on water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19 (WASH-FIT), Interim guidance 29 July 2020 (draft prepared by WHO and UNICEF).

7. For COVID-19, a special Taskforce was also set up at national, provincial, district and village levels for the emergency case such as COVID-19 pandemic. The National Assembly is approving for implementation of the related laws while the MOH is leading and coordinating the line ministries at all levels including other sectors and relevant local administrative authorities to implement all health-and COVID-19 related activities. Guidelines on covid-19 investigation and treatment (in Laos) Interim guideline, 2020 has been established and follows by many orders and regulations.

8. ***In labor sector.*** Key ones are the Labor Law (2013) defines the principles, regulations and measures on administration, monitoring, labor skills development, recruitment, and labor protection in order to enhance the quality and productivity of work in society, so as to ensure the transformation to modernization and industrialization aimed at safeguarding the rights of employees and employers, as well as the legitimate interests and the continual improvement of their livelihoods, while contributing to the promotion of investment, national socio-economic development, and regional and international links. This labor law applies to all employers, registered and unregistered employees, Lao employees working for foreign organizations, and foreign employees working within the Lao PDR.

9. Section VIII of the 2013 labor law provides a mandatory obligation for all parties on Labor Occupational Health and Safety (OHS) to protect labor health and safety, and labor accident and occupational diseases. It sets out an obligation of all levels to take care of labor occupational health and safety include the obligation of employer, obligation of employee, obligation of the designing and supplying entity, and obligation of responsibility parties. The Ministry of Labor and Social Welfare (MLSW) at the national level, the Department of Labor and Social Welfare at the provincial level, the Division of Labor and Social Welfare at the district level and the unit of Labor and Social Welfare at the village level have the responsibility to implement the provision of this labor law. In November 2016, MLSW issues a regulation identifying type of work with hazardous condition not be hired for workers younger than 18-years old.

10. Other laws and regulations include Law on Civil Servants (2016) and Decree on Code of Conduct for Civil Servants (2019), Law on Preventing and Combating Violence Against Women and Children (2006) and Panel Law (2017) contain provisions which are largely consistent with ESS2 and ESS4. These legislations provide regulations and measures to manage, prevent and address potential misconduct among civil servants including health workers and outsourced volunteers, community health and safety issues and risks associated with Sexual Exploitation and Abuse (SEA), Gender-based Violence (GBV) and Violence Against Children (VAC) that may occur under project. The Lao government has also ratified a number of ILO conventions, including on forced labor, child labor, minimum age and equal remuneration.

11. In February 2021, GOL has established a National Deployment and Vaccination Plan (NDVP) for COVID-19 Vaccines (8 February 2021, version 4) identifying key regulations and key agencies to be responsible for ensuring effective planning, implementation, and management of vaccination and deployment programs.

7.2 International guidance includes

WHO Guidance

Advice for the public

- WHO advice for the public, including on social distancing, respiratory hygiene, self-quarantine, and seeking medical advice, can be consulted on this WHO website: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>

Technical guidance

- Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected, issued on March 19, 2020
- Recommendations to Member States to Improve Hygiene Practices, issued on April 1, 2020
- Severe Acute Respiratory Infections Treatment Center, issued on March 28, 2020
- Infection prevention and control at health care facilities (with a focus on settings with limited resources), issued in 2018
- Laboratory biosafety guidance related to coronavirus disease 2019 (COVID-19), issued on March 18, 2020
- Laboratory Biosafety Manual, 3rd edition, issued in 2014
- Laboratory testing for COVID-19, including specimen collection and shipment, issued on March 19, 2020
- Prioritized Laboratory Testing Strategy According to 4Cs Transmission Scenarios, issued on March 21, 2020
- Infection Prevention and Control for the safe management of a dead body in the context of COVID-19, issued on March 24, 2020
- Key considerations for repatriation and quarantine of travelers in relation to the outbreak COVID-19, issued on February 11, 2020
- Preparedness, prevention and control of COVID-19 for refugees and migrants in non-camp settings, issued on April 17, 2020
- Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health, issued on March 18, 2020
- Oxygen sources and distribution for COVID-19 treatment centers, issued on April 4, 2020
- Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response, issued on March 16, 2020
- Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19), issued on March 19, 2020
- Operational considerations for case management of COVID-19 in health facility and community, issued on March 19, 2020
- Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19), issued on February 27, 2020
- Getting your workplace ready for COVID-19, issued on March 19, 2020
- Water, sanitation, hygiene and waste management for COVID-19, issued on March 19, 2020
- Safe management of wastes from health-care activities, issued in 2014

- Advice on the use of masks in the community, during home care and in healthcare settings in the context of the novel coronavirus (COVID-19) outbreak, issued on March 19, 2020
- Disability Considerations during the COVID-19 outbreak, issued on March 26, 2020

WORLD BANK GROUP GUIDANCE

- Technical Note: Public Consultations and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings, issued on March 20, 2020
- Technical Note: Use of Military Forces to Assist in COVID-19 Operations, issued on March 25, 2020
- ESF/Safeguards Interim Note: COVID-19 Considerations in Construction/Civil Works Projects, issued on April 7, 2020
- Technical Note on SEA/H for HNP COVID Response Operations, issued in March 2020
- Interim Advice for IFC Clients on Preventing and Managing Health Risks of COVID-19 in the Workplace, issued on April 6, 2020
- Interim Advice for IFC Clients on Supporting Workers in the Context of COVID-19, issued on April 6, 2020
- IFC Tip Sheet for Company Leadership on Crisis Response: Facing the COVID-19 Pandemic, issued on April 6, 2020
- WBG EHS Guidelines for Healthcare Facilities, issued on April 30, 2007

ILO GUIDANCE

- ILO Standards and COVID-19 FAQ, issued on March 23, 2020 (provides a compilation of answers to most frequently asked questions related to international labor standards and COVID-19)

MFI GUIDANCE

- ADB Managing Infectious Medical Waste during the COVID-19 Pandemic
- IDB Invest Guidance for Infrastructure Projects on COVID-19: A Rapid Risk Profile and Decision Framework
- KfW DEG COVID-19 Guidance for employers, issued on March 31, 2020
- CDC Group COVID-19 Guidance for Employers, issued on March 23, 2020

ANNEX VIII. ASSESSMENT OF NATIONAL SYSTEM (NDVP)

In responding to the WB/RSA suggestions, this annex provides a brief information on the National Deployment and Vaccination Program (NDVP) related to (a) an assessment on the capacity of the national system to monitor, investigate and respond to adverse events following vaccination; (b) an assessment of the risks related to transport, storage, handling, and disposal of vaccine; (c) an assessment of vaccine cold chain temperature monitoring; and (d) training plan on vaccines deployment. Details are provided in the NDVP (February 2021).

A. Assessment on the capacity of the national system to monitor, investigate and respond to adverse events following vaccination

Post-deployment surveillance system, vaccine safety monitoring, and management of AEFI.

This was also described in the NDVP. The post-deployment surveillance aims to monitor safety and effectiveness of COVID-19 vaccines focusing on building GOL capacity to investigate, analyze and manage any adverse event following immunization (AEFI) and adverse event of special interest (AESI). This is considered priority and necessary for COVID-19 vaccines which have been approved for application on an emergency basis. Rapid decision-making in the context of pandemic requires real-time evaluation of safety and efficacy of COVID-19 vaccine data in order to decrease the negative impact on the health of individuals and immunization program.

The NDVP suggested that early detect any adverse events and implement appropriate and quick response in order to decrease the negative impact on the health of individuals and the immunization program. Key action to implement a surveillance system for AEFIs include definition of roles and responsibilities of the National Regulatory Authority (FDD) and the National Immunization Program; creation of an AEFI National Committee; development and dissemination of procedures and tools for detection, reporting and investigation of AEFIs and conduct periodical training (every year) to NIP and FDD staff and health care professionals (at all levels) in case detection, reporting and investigation of AEFIs. FDD of MOH is national regulatory authority responsible for ensuring that any pharmaceutical product, including vaccines, used within the country is of good quality, effective and safe for the purpose for which it is proposed. FDD will ensure that quality and effectiveness criteria are met before approval of the vaccine's medical use and safe vaccine use and the monitoring of safety events in the pre-licensure and post-marketing phases. FDD is directly involved in immunization safety surveillance in close collaboration with the NIP. FDD also contributes to the global AEFI surveillance with regular reporting on the number of AEFI detected in Lao PDR to Uppsala Monitoring Centre in Sweden (WHO Collaborating Centre for International Drug Monitoring). Laos PDR is a member from 2015. Capacity building of FDD is also defined in the NDVP.

Main weaknesses and limitations identified in the NDVP for conducting vaccine safety monitoring and causality assessment include: (i) Limited availability of valid medical diagnosis; (ii) Investigation is not done timely; (iii) Subnational level capacity is insufficient; and (iv) Lack of clear terms and responsibility of each level. The new guidelines are being developed with clear reporting flow, timeline, and responsibilities of each level, as well as specific training aimed at HCW and causality assessment committee will be organized. Vaccine adverse reactions may occur due to some inherent properties of the vaccine (vaccine product-related reactions) or due to quality defects (vaccine quality defect-related reactions) or due to immunization error-related reactions. In some cases, the cause of the AEFI remains unknown. Immunization error-related reactions (previously classified as "program errors") are avoidable. Minor vaccine reactions are common and do not require special treatment. Rare, serious vaccine reactions need timely treatment by qualified medical personnel.

Adverse Events of Special Interest (AESI). An AESI is a pre-specified medically significant event that has the potential to be causally associated with a vaccine product that needs to be carefully monitored and confirmed by further special studies. AESI are identified through active vaccine safety surveillance system using pre-defined criteria or specific case definitions including events where there is: Proven association with immunization that is true for most if not all vaccines; Proven association with a known vaccine platform and/ or adjuvant that is being used in any COVID-19 vaccine; Theoretical concern based on immunopathogenesis of COVID-19 disease; Theoretical concern related to viral replication during SARS-CoV-2 infection; Theoretical concerns because it has been demonstrated in an animal model with one or more candidate vaccine platforms. Details on the activities will be conducted as part of the NDVP implementation.

National Immunization Program (NIP). An effective immunization safety surveillance system requires the involvement of health workers and NIP staff at all levels of the immunization program (health centre level, district, provincial and national level). Main functions of the NIP staff by administrative level in AEFI surveillance are:

- District level: AEFI detection, recording and reporting, implementation of corrective measures and Public education and communication
- Provincial level: Support district level NIP staff, preliminary causality assessment, report to the national expert committee, data analysis and active case finding, Implementation of corrective measures and supervision.
- National level: support for field investigation, data analysis and causality assessment, provide recommendations and guidance to all levels, communication and information with the public, conduct research studies and Information exchange with WHO and international agencies.

National Immunization Safety Expert Committee. MOH has created the Adverse Event Following Immunization (AEFI) medical products use committee (MOH - Agreement No 2019 of 16 July 2018). Main roles and responsibilities of the Committee are: Support the committee to implement their routine assignment and report; Provide technical advice on training and SOPs development and recommend solutions for the sub-committees; Develop strategies and decree to accommodate the implementation of routine immunization to ensure vaccination coverage of more than 95%; Promote and advocate collaboration with development partners; Organize trainings for AEFI and AESI surveillance and response. In addition, two sub-committees and one secretariat were also created to ensure implementation and supervision. Specific training for causality assessment for COVID-19 will be organized and delivered for NIP and the National Immunization Safety Expert Committee.

Implementation of AEFI/AESI surveillance and reporting. Per NDVP, the surveillance comprises: Conduct regular meetings between FDD and NIP (quarterly); Training of Province level—Virtual training to Provincial Health Departments and provincial rapid response teams (Q1 2021); District level—Disseminate training materials (job aide and ppt slides) through official letter and WhatsApp (Q1 2021); Health centre level—Integrate AEFI surveillance training into routine supportive supervision (Q1 or Q2 2021); and Clinicians; and Development and dissemination pharmacovigilance materials (Job aids, SOPs and reporting forms and presentations/pdf). In case of a suspected AEFI or AESI, especially serious adverse events, will be immediately reported (via telephone or Whatsapp ®) to the respective surveillance office at the District Health Office (DHO). A standard reporting form with basic information for reporting from the local to national levels of NIP and the Immunization Safety Expert Committee for causality assessment is provided in the NDVP. Job aids for AEFI detection, reporting, causality assessment and standard reporting forms for AEFI notification are available at all health facilities. A list of AESIs will be available for each vaccine for

careful monitoring through active vaccine safety surveillance and reporting. The following events will be immediately reported:

- Any serious AEFI: any event that results in death, is life-threatening, requires in-patient hospitalization or prolongation of existing hospitalization, results in persistent or significant disability/incapacity, or is a congenital anomaly/birth defect;
- Signals and events associated with a newly introduced vaccine;
- AEFI that may have been caused by an immunization error;
- Significant events of unexplained cause occurring within 30 days after vaccination;
- Adverse events of special interest (AESI) related with distributed vaccines;
- Events causing significant parental or community concern.
- Minor AEFI such as high fever and minor local reactions are optional.

Investigation of AEFI/AESIs. Some of the AEFI/AESI reported will required an assessment or investigation to determine the cause. If necessary, investigation teams will be rapidly deployed (within 48hours) after notification to conduct a field investigation. These teams are composed by a NIP staff, pediatrician, UNICEF staff and WHO staff. The objective of the investigation is to find the cause of an AEFI and to implement follow-up actions. An investigation report will be produced within 5 days and sent to the NIP for further revision. The AEFI investigation follows standard principles of epidemiologic investigation and results can lead from a withdraw of a specific batch of the vaccine to suspension of the vaccination campaign. If necessary, laboratory testing will support the investigation to confirm or exclude the suspected cause. Details are provided in the NDVP. The following AEFIs will be investigated:

- Serious AEFI (as stated above);
- Any medical event that requires intervention to prevent one of the outcomes above may also be considered as serious;
- Clusters of AEFI;
- Any unrecognized event associated with an old or newly introduced vaccine;
- AEFI that involves an increased number or rates of known cause; Any suspected immunization error;
- Any AEFI that causes significant parental or public concern.

Adverse events of special interest (AESI). The NDVP reported that Lao PDR has recently completed sub-national trainings for adverse drug reaction (ADR) and adverse event following immunization (AEFI) in all 18 provinces. The existing provincial ADR committees – called Drug & Therapeutic Committee (DTC) - is composed of physicians from provincial hospitals and will support all aspects of monitoring and investigation of AEFI cases. Each provincial hospital has a DTC focal point who would participate in the national training on use of Pfizer COVID-19 vaccine, as well as the members of the provincial vaccination team. The Pfizer explainer has been translated into Lao language and will be made available to all AEFI committee and DTC members, as well as safety related information in the WHO SAGE Interim recommendations for use of the Pfizer/BioNTech COVID-19 vaccine, BNT162b2, under Emergency Use Listing.

Causality assessment. The NIP at MOH and the National Immunization Safety Expert Committee will conduct a systematic evaluation of the information obtained about an AEFI to determine the likelihood that the event might have been caused by the vaccine received. The method used for AEFI case review and causality assessment is based on the WHO Causality assessment of an adverse event following immunization (AEFI) – user manual for the revised WHO AEFI causality assessment classification user manual³⁴. If laboratory

³⁴ Causality assessment of an adverse event following immunization (AEFI) – user manual for the revised WHO AEFI causality assessment classification. WHO (2013) http://www.who.int/vaccine_safety/publications/aevi_manual.pdf

testing is necessary, specimen collection will be conducted among case to support causality assessment. A causality assessment report will be produced by the committee for each AEFI/AESI investigated.

Risk due to communication and response to serious AEFI. One of the objectives of the Lao Immunization Safety Surveillance system is to maintain the confidence of the community and health staff in the immunization program by responding appropriately and promptly to their concerns about immunization safety. The risk communication team should be made aware of the occurrence of a serious event as soon as possible to support communication response at the appropriate level. This will be particularly important during the introduction of COVID-19 vaccines as misinformation may spread rapidly. Further details can be found in communication module provided as part of the NDVP. As soon as AEFI is detected, at the health facility, the following actions will be taken by the health care worker: Treats the patient or transfers to higher-level treatment, if needed; Communicates with the parents and community; Responds to rumours or public enquiry; Fills in a AEFI reporting form; Investigate for cluster of cases; If it is a serious AEFI, report immediately to the DHO for investigation. The National AEFI Committee chaired by Ministry of Health will guide the NIP on risk communication relating to serious AEFI.

B. Assessment of the risks related to transport, storage, handling, and disposal of vaccine.

On reception, transport and distribution process, it is expected that a number of shipments can be received at the Wattay International airport (VTE) and can be distributed as soon as the vaccine is authorized and deployed into the country, but there is no cold chain storage capacity at this point of entry yet. The MCHC will be the clearing agency and it is necessary to manage all shipments, storage at appropriate warehousing, repacking, distribution and monitoring according to the manufacturer's instructions, including identify routes, transport mean and destinations, and monitor the supplies shipped. The activity/information must be systematically documented and registered in log files or registries and timely report to the respective level (as identified in the immunization monitoring system). For vaccines requiring cold chain of +2-8 °C, all vaccines and supplies will be handled carefully and with a rigorous temperature control in the cold chain at all stages of the deployment.

Given the current limited cold chain capacity in Lao PDR, the distribution and expected delivery time for vaccine requiring temperatures between +2 and +8 °C will be around 1-2 days at central for inspection and packing and 3-6 days to reach the provinces depending on locations. Vaccines and supplies will be inspected upon arrival to ensure vaccines and ancillary items have not been damaged or compromised during shipment. Regional cold room warehouses in Oudomxay and Champasack provinces might play a role in storing and distribution of COVID-19 vaccines. Ancillary supplies including syringes, safety boxes, PPEs, IEC materials, etc. will be transported in dry conditions. MOH will be responsible for transportation and distribution - supported by UNICEF and WHO. The distribution network is organized in three main distribution routes by trucks from the central warehouse in VTE. If seven-day deployment is not ensured, delivery will be conducted by plane for some of the provinces.

Supply chain *management tools.* The following tools will assist the Head of logistics and Head of vaccination in supply chain and logistics support planning: Cold chain equipment

inventory and gap analysis tool: Provides support for vaccine inventory management; EPI logistics forecasting tool: Designed to guide the process of forecasting the needs for vaccines, safe injections equipment as well as cold chain and ambient storage capacities for national immunization program; Immunization supply chain sizing tool: Provides guidance in the process of planning the cold chain capacity and estimation of the required cold chain capacity at each level and facility; Vaccine volume calculator: Estimates the net storage volume of vaccines per person to be vaccinated; Lao PDR is using mSupply, pharmaceutical supply chain software, to monitor and manage vaccine supply chain. All the vaccines in Lao PDR should be moving through mSupply and its process of moving is ongoing.

C. Assessment of vaccine cold chain temperature monitoring

Cold chain capacity and management. In addition to the assessment on waste management discussed in the main text (Section 4.1), the NDVP also assessed and planned on the capacity and requirement for cold chain storage, transportation, distribution, and monitoring system to ensure rapid and adequate deployment while COVID-19 vaccines require different cold chain conditions (some vaccines require ultra-cold chain at -70 °C, others at -20 °C and the others must be stored at a temperature of between +2°C and +8 °C without freezing). Given the absence of capacity for storage and transport of vaccines and ancillary items under ultra-cold chain conditions (UCC) in the country, the NDVP has established the preference of receiving approved vaccines requiring temperatures between 2 to 8 °C, at least for the initial stage, in order to avoid programmatic and logistics complications. Capacity on safe-injection equipment (such as syringes, safety boxes, and PPEs) can be stored in dry storage, however, keeping cleanliness, stock rotation, and damp-proofing appeared to be inadequate and close monitoring during the vaccination is thus necessary. Both dry storage capacity available for injection devices (syringes) and safety boxes as well as the capacity for cold chain between +2 and +8 °C, -20 °C and -70 °C remain limited both in VTE and provinces, but dry ice is available in Lao PDR.

For the vaccine requiring UCC. For safety reason, vaccines requiring UCC, will need special procedures and precaution. WHO recommends that the Pfizer COVID-19 vaccine should be administered only in settings where anaphylaxis/shock can be treated. Management of anaphylaxis will therefore feature prominently in the in-country training ahead of receipt of the vaccines requiring UCC. For the deployment of the vaccines requiring UCC, central level training will involve senior hospital staff from all prioritized provinces, as well as ICU team and DTC members. These clinicians will form the vaccination teams and their supervisors. At least one week prior to start of vaccination, minimum two staff per vaccination site will be trained for handling of UCC vaccines with training materials developed by NIP, WHO, and UNICEF at a one-day face-to-face training session in Vientiane Capital. At the end of the training, there will be a test to the trainees to assess the quality of the training. Microplanning of the delivery of the Pfizer COVID-19 vaccine has already begun and vaccination sites have been mapped.

D. Training on vaccines deployment.

This has also been identified in the NDVP. Training will be undertaken at all levels for both technical and managerial staff to ensure not only efficient performance when it comes to executing specific tasks, but also foster teamwork and coordination. Training before undertaking the vaccination campaign are: Designate a focal point responsible to coordinate

with stakeholders for planning training and supervision at different levels; Conduct a training needs assessment and identify the job categories that need to be trained, including not only vaccinators, but also individuals responsible for promoting the vaccine and clinical waste handlers; Define the key competencies required by each category of personnel in order to deploy COVID-19 vaccine safely and correctly; Determine the training modality for each job category; Review available training materials at global level and determine adaptations needed, including translation; and Identify the partners within and outside MOH (e.g. Ministry of Education, national training institutions such as nursing schools, and those at subnational, district and community level), that would help with training development and delivery.

Training method include “training of trainers” with subsequent cascade training for all staff each province. The training courses, workshop and orientations will be organized based on the COVID-19 current situation and restrictions, either classroom training, online and simulation exercises. Training courses will be evaluated using a pre- and post-test to assess the acquisition of knowledge, as well as a quality assessment of the training using a Likert scale survey. Trainees will have to pass a test at the end of each training to be considered as part of the COVID-19 vaccination workforce. Content of the training will follows Regional and Global WHO training materials⁵ and they will be translated and distributed among participants. The training course include the following topics: Introduction to COVID-19 vaccination training; Storage, handling, delivery, and waste management of COVID-19 vaccines; Organizing COVID-19 vaccination sessions; AEFI monitoring for COVID-19 vaccination; Recording and monitoring COVID-19 vaccination; and Communication with the community about COVID-19 vaccination.

Training programs and training materials will be developed based on the specific learning objectives and distributed among participants. Several trainings will be organized based on the target audience:

- Vaccination teams: Each vaccination team will follow one day orientation on cold chain, organization of vaccine posts, safe injection technique, proper handle of hazardous materials and waste management, data collection and reporting procedures, surveillance of AEFI and interpersonal communication skills.
- Warehouse and transport staff: one day training in good management practices, repackaging, cold chain maintenance, inventory management, reporting procedures.
- Supervisors: Provincial supervisors will be trained on supervision of teams and coordination and managerial responsibilities including issues such as identifying and resolving problems quickly by working within the command chain, management of data and decision-making, and staff performance related management issues, data management, analysis and situational report writing.

⁵ COVID-19 vaccination training for health workers. OpenWHO courses. <https://openwho.org/courses/covid-19-vaccination-healthworkers-en>