NEPAL COVID-19 EMERGENCY RESPONSE AND HEALTH SYSTEMS PREPAREDNESS PROJECT

Government of Nepal
Ministry of Health and Population

Contents

Introduction

This Environmental and Social Management Framework (ESMF) examines the general environmental and social risks and impacts of the Nepal COVID-19 Emergency Response and Health Systems Preparedness (CERHSP) Project (P173760), and sets out the guidelines and procedures by which the Government of Nepal (GoN) will assess and mitigate these impacts as they relate to minor rehabilitation and upgrade of health infrastructure and facilities, procurement, installation and operation of healthcare facilities, and the deployment of a safe and effective vaccine in response to COVID-19. The ESMF also contains measures and plans to avoid, minimize, mitigate and adverse risks and impacts of the project. The Government - through the Ministry of Health and Population (MoHP) - is implementing the project with support from the World Bank to address the spread of COVID-19 in the country. As COVID-19 places a substantial burden on inpatient and outpatient health care services, the government requested and has received financial and technical support from World Bank to strengthen Nepal's healthcare systems towards responding to the disease. In April, 2020 the Bank approved its first financing for the project, enabling the government to carry out urgent response against COVID, enhancing systems for Case Investigation and Contact Tracing (CICT), isolating and treating COVID patients, and disseminating risks communication messages across the country. With the availability of COVID vaccines, the government requested for an additional financing (AF) (P175848) in the amount of US$75 million to deepen and expand the scope of the parent project (P173760), and to finance the procurement and deployment of safe and effective COVID-19 vaccines for administration to the population prioritized by the government. This additional financing was approved in March 2021. The Government requested the Bank for a second additional financing in the amount of US$18 million on October 25, 2021 to support scale-up of COVID-19 vaccination in the country.

Based on the World Bank's Environmental and Social Framework (ESF), an ESMF was developed, consulted upon, disclosed (on August 31, 2020), revised to address financing for purchase and deployment of safe and effective vaccines and re-disclosed on March 24, 2021 (English versions) and May 19, 2021 (Nepali version). As the second AF proposes to expand ongoing activities i.e., scaled procurement and deployment of vaccines, the ESMF has been updated to provide additional guidance for assessing and managing emerging risks related to operations supporting COVID-19 health response. This updated ESMF is developed in accordance with the relevant laws and regulations of Nepal, the relevant Environmental and Social Standards (ESSs) of the World Bank, the World Bank Group's Environmental, Health and Safety Guidelines, and relevant World Health Organizations (WHO) protocols on COVID-19.[1] The ESMF includes a revised tool for screening the environmental and social impacts of project activities (Annex II), a revised Environmental and Social Management Plan (ESMP) (Annex III) and an Infection Control and Medical Waste Management Plan (ICWMP) (Annex IV). The ESMP notes potential environmental, social, health and safety issues associated with the rehabilitation and upgrade of healthcare facilities in response to COVID-19, procurement, installation and operation of healthcare facilities, and the deployment of COVID vaccines in a safe, effective, and equitable manner. This updated ESMF is outlined as follows.

[1] *See http://documents1.worldbank.org/curated/en/157871484635724258/pdf/112110-WP-Final-General-EHS-Guidelines.pdf*

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Executive Summary

This Environmental and Social Management Framework (ESMF) examines the general environmental and social risks and impacts of the Nepal COVID-19 Emergency Response and Health Systems Preparedness (CERHSP) Project and sets out the guidelines and procedures by which the Government of Nepal (GoN) will assess and mitigate these risks. The ESMF contains measures and plans to avoid, minimize, mitigate, and offset adverse risks and impacts of the project.

The GoN, through the Ministry of Health and Population (MoHP), is implementing the project with support from the World Bank, to strengthen Nepal's healthcare systems towards responding to the virus. The project comprises four components: Component 1 on Emergency COVID-19 Response; Component 2 on Community Engagement and Risk Communication; Component 3 on Implementation Management and Monitoring and Evaluation; and Component 4, a Contingency Emergency Response Component. The MoHP is the lead government agency responsible for the overall implementation of the project, with specific responsibilities for various departments and divisions of the Ministry; namely, the Department of Health Services (DoHS), the Policy, Planning and Monitoring Division, the Health Coordination Division (HCD), the Epidemiology and Disease Control Division, the Management Division (MD), the National Public Health Laboratory, and the Health Emergency and Operation Centre (HEOC).

The ESMF has been developed in accordance with the World Bank's Environmental and Social Framework (ESF) to serve as the guiding instrument for managing the environmental and social impacts of the project. As the second AF proposes to scale-up procurement and deployment of COVID-19 vaccines, the ESMF has been updated to provide additional guidance for assessing and managing emerging risks hitherto not identified for operations supporting COVID-19 health response. All activities under the project will be operationalized in a way that they are consistent with the relevant laws, regulations and polices of the GoN, the World Bank's Environmental and Social Standards (ESS), the World Bank Group's Environmental, Health and Safety (EHS) Guidelines, and relevant World Health Organization (WHO) protocols on COVID-19.[2] The key activities which may give rise to environmental and social risk and impacts include:

- Procurement and deployment of an estimated 10 million COVID vaccines,
- The use of security personnel to transport and/or protect vaccines and vaccine storage facilities and personnel during vaccination programs especially in the provinces and remote locations;
- Use of fixed health facilities, rountine outreach immunization sites and vaccination campaign immunization sites .
- Procurement and/or rehabilitation and installation of cold-chain facilities
- Procurement and use of PPEs for health workers, hygiene materials and other consumables
- Rehabilitation of ICU beds and associated facilities
- Collection, tranport, and testing of specimens, samples and reagents
- Procurement, installation and use of refrigerated and light vehicles

[2] Six of the ten ESSs of the ESF are relevant: ESS1 on the Assessment and Management of Environmental and Social Risks and Impacts; ESS2 on Labour and Working Conditions; ESS3 on Resource Efficiency and Pollution Prevention; ESS4 on Community Health and Safety; ESS7 on Indigenous People; and ESS10 on Stakeholder Engagement and Information Disclosure.

- Procurement, installation and operationalization of therapeutic oxygen supplies in select public hospitals
- Stakeholder engagement sessions with administrative authorities in the provinces, and group discussions with representatives from IP groups.
- Design, production and distribution of communication and information disclosure materials including for social and behavioural change communication
- Media engagements including radio, TV, and print

Based on preliminary assessments, the implementation of these activities may give rise to substantial environmental concerns, notably (i) occupational health and safety (OHS), (ii) challenges in the disposal and management of hazardous waste and contaminated fluids from quarantine and isolation centers, laboratories, and screening posts, (iii) management and disposal of medical waste from the vacciation program, (iv) community health and safety, (v) the potential for social tension which may arise from perceived inequities and exclusion from the vaccination; (vi) the potential for excluding vulnerable and marginalized groups; (vii) the potential for occurrence of serious adverse effects following vaccination; (viii) the potential for arbitary use of force by security personnel who may be deployed by the GoN to protect logistics, storage and personnel during the COVID-19 vaccination program; and (ix) life and fire safety concerns in COVID-19 designated health facilities supported with oxygen generation plants. The GoN National Vaccine Deployment Plan, guided by the WHO's Fair Allocation Framework, provides guarantees to ensure to equitable and priority access to vaccines for vulnerable and marginalized populations including migrant populations.

Consistent with the requirements of World Bank's ESS1, some activities have been predetermined as ineligible for support under the project due to their potential for causing high environmental and social risks and impacts that are diverse, irreversible or unprecedented (see ESCP). As noted in Table 5-1, the general risks and impacts associated with the above activities along with suggested mitigation measures have been considered in this ESMF. As a standard procedure, each subproject activities will be subject to an environmental and social screening process (using Annex II) before it is selected for support under the project. The results of the screening exercise will inform the scope of detailed assessment followed by planning and implementation of Environmental and Social Management Plans (ESMPs) where relevant. The MoHP has commenced and will continue to implement its Infection Control and Waste Management Plan (ICWMP) to manage health care and medical waste (e.g. empty vials and syringes) that are associated with the proposed vaccination program. The ESMF includes templates for an ESMP and an ICWMP.

A stakeholder engagement plan (SEP) for the project has been prepared, disclosed on February 5, 2021, updated and redisclosed on May 19, 2021, and expresses the MoHP's proposed strategies for disclosing relevant information about the project and undertaking consultation with key stakeholders and local communities throughout the project life. Specific and targeted approaches will be adopted to ensure that vulnerable and marginalized groups including women, indigenous people, Dalits, and people with disabilities, have meaningful participation in decision making and implementation of the project activities. During the design of the parent project, social risk related to the potential for vaccine scepticism and misconceptions about the benefits and risks of the COVID-19 vaccine were envisaged. Therefore, culturally appropriate, stakeholder activities prioritized awareness raising amongst all stakeholders including disadvantaged and vulnerable individuals or groups in order to generate vaccine acceptability and voluntary participation in vaccination activities. As part of the SEP, the MoHP outlined a grievance

redress mechanism (GRM) under the project, noting channels for uptake and resolution of project-related complaints and grievances from people that may feel aggrieved or adversely impacted by project activities. The GRM is also used for addressing project-related gender-based violence (GBV) issues. GBV cases are being referred to the National Commission for Women and the One Stop Crisis Management Centre.

The Health Emergency and Operation Centre (HEOC), a division of the MoHP, is responsible for social and environmental due diligence, social and environmental risks screening of project activities, and monitoring the implementing this ESMF, the project ESCP and SEP, in coordination with the following units: MD, Curative Services Division (CSD), National Health Education, Information and Communication Centre (NHEICC), and the Nursing Division (ND). The HEOC will coordinate and maintain oversight of the activities related to the management of environmental and social risks and impacts as envisaged by the ESMF throughout the project lifecycle. An Environmental Specialist and a Social Specialist have been recruited to augment the capacity at the HEOC and play lead roles in ensuring the environmental and social related risks as outlined in the ESMF are carried out. The HEOC will be responsible for reporting all project activities to the World Bank. The World Bank will work with the MoHP and other development partners to develop and implement a capacity building plan, as well as train and provide technical support for project staff towards effective implementation of the ESCP, ESMF, SEP, and other management plans.

1. Background

The Nepal COVID-19 Emergency Response and Health Systems Preparedness (CERHSP) Project (P173760) aims at strengthening the country's health systems and improving its overall epidemiological capacity to undertake surveillance and response to COVID-19 and other infectious diseases. The Project Development Objective (PDO) of the parent project and the AF is to prevent, detect, and respond to the threat posed by COVID-19 and to strengthen national systems for public health preparedness in Nepal. It will achieve this objective by supporting the Government of Nepal, and specifically the Ministry of Health and Population (MOHP) , to (i) provide emergency COVID19 response for better case detection, confirmation, contact tracing, recording, and reporting as well for strengthening health system for enhanced case diagnosis and treatment, focusing on critical hospital and laboratory infrastructure needed for COVID-19 and other public health emergencies and purchase and deployment of safe and effective vaccines to eligible populations; (ii) support community engagement and risk communication; (iii) strengthen the MoHP and its emergency coordination and implementation structures to improve the coordination of the response, monitor and learn from the response, and as well as to support project implementation including procurement, financial management, undertaking of the Stakeholder Engagement Plan (SEP) and compliance with the Environment and Social Commitment Plan (ECSP); and (iv) enable the government, following an eligible crisis or event, to request the Bank to re-allocate project funds to support additional emergency response through Contingency Emergency Response Component. This AF proposes to scale up purchase, delivery, and distribution of the vaccines.

The implementation of the project activities presents notable environmental and social risks and impacts (see section 5) for which mitigation measures are required as per the relevant World Bank ESSs. Through the implementation of the parent project, the nature, scale and magnitude of some risks and impacts are known and can be predicted. This framework provides guidance and procedures for screening and managing environmental and social risks and impacts that may result from the implementation of the project activities. With the significant experience of successfully purchasing and deploying COVID-19 vaccination to almost half of Nepali population, the MoHP will use this ESMF along with Nepal's country environmental protection procedures to identify and carry out relevant site and activity-specific environmental and social assessments, as well as outline and implement risks mitigation measures in accordance with the World Bank's ESF. Specifically, the ESMF:

- Outlines procedures and methodologies for environmental and social screening and assessment, planning, reviewing, and managing environmental and social risks and impacts for sub-projects to be financed under the project.
- Provides guidance on the implementation of the environmental and social management measures and provide a plan for monitoring the implementation of environmental and social standards.
- Specifies the institutional arrangements, roles and responsibilities for managing, monitoring and reporting on the environmental and social concerns related to the project activities.
- Provides guidance for conducting stakeholder engagement and information disclosure.
- Determines measures for augmenting institutional capacity, including those related to training and capacity building needed to successfully implement the provisions of the ESMF.

The ESMF has been prepared during the process of project development through an extensive process of stakeholder consultation as outlined in the Project's Stakeholder Engagement Plan (SEP). The implementation of the ESMF will facilitate compliance with the relevant Environmental and Social Standards (ESS) of the World Bank and the national requirements to address the risks and impacts of the project.

1.1 Process adopted for preparing the ESMF

The ESMF was prepared in the context of COVID-induced disruptions including restrictions on movement and in-person gatherings and face-to-face meetings with stakeholders. The data and information used to prepare the framework were drawn from secondary data, complemented by primary information collected via virtual discussions with selected stakeholders including GoN officials from federal and provincial levels, development partners non-government organizations (NGOs), and key representatives for Indigenous Peoples, Dalits and other vulnerable groups, and hospital administrators. No field surveys and investigations were conducted due to the restrictions noted above.

2. Project Description

The outbreak of the Coronavirus disease (COVID-19) has been spreading globally since December 2019. Given the scale of transmission, the World Health Organization (WHO) declared the disease a global pandemic in March 2020, with a call on countries to take proactive measures to prevent and/or respond to further outbreaks. To respond to the disease, the Government of Nepal (GoN) requested and received International Development Association (IDA) funding to implement the Nepal COVID-19 Emergency Response and Health Systems Preparedness (CERHSP) Project. The project aims to prevent, detect and respond to the threat posed by COVID-19 and strengthen national systems for public health preparedness and comprises four components as detailed below.

Component 1: Emergency COVID-19 response focused on enhancing the capacity of the Ministry of Health and Population (MoHP) and its agencies to detect, confirm, contract- trace and treat COVID-19 cases. Activities being financed under this component include sub-component 1.1: case detection, confirmation, contact-tracing, recording and reporting as per MOHP protocols, sub-component 1.2: Health System Strengthening in preparedness planning in order to provide optimal medical care, maintain essential community healthcare services and minimize risks for patients and health care workers, and sub-component 1.3: COVID-19 vaccine purchase.

Component 2: Community engagement and risks communication. This component will help to ensure the Nepali populace is empowered with timely and relevant information to prevent and manage COVID-19 infections as well as to promote health during the pandemic, through effective communications in particular to vulnerable groups.

Component 3: Strengthen capacity for project coordination, implementation, and monitoring. This component will strengthen MoHP and its coordinating structure and implementation divisions for exercising requisite technical, fiduciary and safeguards due- diligence in the COVID-19 health sector response and knowledge, management and learning.

Component 4: Contingency Emergency Response Component (CERC) to finance a national response, in face of an eligible emergency or crisis, if required.

The original Credit of US$29 million became effective on April 7, 2020 and the first Additional Financing of US$75 million became effective on April 6, 2021 has since been under implementation. At the last implementation support review in September 2021, the project progress towards achieving the development objectives as well as overall implementation was rated “Satisfactory”.

Additionally, the Government has requested the Bank for a second Additional Financing of US$18

million to scale-up purchase and deployment of safe and effective COVID-19 vaccines for Nepal.

The activities under the various components are targeted at the Nepal federation and implemented proportionally at the federal, provincial and local levels based on epidemiological needs of the country. In all, about 194 hospitals (including the Patan, Bir and Sukraraj hospitals) with over 1146 ICU beds are designated for COVID-19 case management facilities. With funds and technical support from the parent project, the MoHP enhanced Case Investigation and Contact Tracing (CICT) systems at the national and provincial levels; strengthened over 78 acute care health facilities with isolation capacity; increased the national COVID-19 testing capacity from one public laboratory (national public health laboratory) to 101 laboratories across the country; and financed over 1,276 new/rehabilitated ICU beds and facilities in selected public hospitals for managing public health emergences. Official statistics indicate that Nepal carried out 4,6218,231 RT-PCR tests as of November 29, 2021, 821,121 of them testing positive for the disease. About 97.7% (802,653) patients have recovered whilst 11,524 lost their lives to the pandemic. Risk communication messages are being delivered to the public through multiple channels including media briefings, radio, televisions, mobile and online applications, and posters at locations in cities and villages across the country. In addition, two call centers have been established and serves as additional avenues through which individuals can seek spot-on information about COVID and ongoing government interventions to manage the pandemic, including messages for prevention of COVID-19 and information about vaccines and treatment facilities. The call centers also serve as avenues for receiving complaints related to the government's public health response to COVID-19. This second AF will scale up vaccine procurement and deployment complementing other COVID-19 health response interventions of the project.

Under component 1, the AF (through sub-component 1.1) will finance additional goods, consulting and non-consulting services and operational costs to test, trace, treat and report on the infection for appropriate public health response. Sub-component 1.2 will strengthen the institutional framework and health systems to facilitate the safe, effective and equitable deployment of the COVID-19 vaccine , including: (a) development of national policies surrounding prioritization of vaccine allocation; regulatory standards for vaccination; standards and protocols surrounding cold chain, supplies, storage, logistics, training and equitable vaccine deployment taking into account voluntary vaccination, occupational health and safety, gender and vulnerable populations; (b) procurement, supply and distribution of COVID-19 vaccine related cold chain equipment, vehicles, vaccine management information systems, logistics information systems, medical supplies, consumables, PPE and hygiene materials in support of vaccination; (c) trainings and post training support for vaccinators, technical and managerial staff engaged in the vaccination campaign; and (d) technical and material support for compliance with health care waste management regulations of GoN. Sub-component 1.3 involves an amount of US$67.5 million to purchase, delivery and distribution of COVID-19 vaccines.

As part of component 2, the AF will fund additional technical assistance to reinforce ongoing community engagement and risk communications strategy for vaccines, focused on planning and prioritization for vaccine deployment, management of vaccine hesitancy and addressing misinformation, including (a) cultural contextualization of all targeting and vaccine deployment plans; (b) social and behavior change communication (SBCC) for preventive and promotive health leveraging mass, social, print and interpersonal counseling; (c) outreach interventions; and (d) stakeholder and community engagement for feedback and GRM.

Investments in component 3 will be scaled up to support (a) project implementation and management focusing on capacitating the MoHP's to undertake procurement, financial, fiduciary, environmental and social risks management, reporting, monitoring and evaluation, and knowledge management and learning; and (b) support for a framework of digital technology-based information systems (routine data, surveillance and monitoring) as well as periodic studies to provide evidence and data that will inform additional COVID-19 vaccine purchase, delivery and distribution.

In summary, the project will support and finance the following activities, goods, consulting and non-consulting services.

Goods, Supplies and physical activities

- Procurement and deployment of COVID vaccines. Based on the project paper, an estimated 10 million doses may be procured with project funds. Based on the national vaccine deployment plan (NVDP, 2021), the government may deploy security personnel to transport and/or protect vaccines and vaccine storage facilities and personnel during vaccination programs especially in the provinces and remote locations;
- Use of fixed health facilities, rountine outreach immunization sites and vaccination campaign immunization sites .
- Procurement and/or rehabilitation and installation of cold-chain facilities
- Procurement and use of PPEs for health workers, hygiene materials and other consumables
- Rehabilitation of ICU beds and associated facilities (financed under the parent project)
- Procurement, installation and operationalization of therapeutic oxygen supplies in select public hospitals
- Collection, tranport, and testing of specimens, samples and reagents
- Material/technical support for compliance with health care waste management regulations including installation of hand hygiene stations
- Procurement, installation and use of refrigerated and light vehicles

Consulting and technical services

- Stakeholder engagement sessions with administrative authorities in the provinces, group discussions with representatives from IP groups.
- Design, production and distribution of communication and information disclosure materials including for social and behavioural change communication.
- Media engagements including radio, TV, and print
- Design framework of digital technology-based information systems
- Development of policy framework surrounding vaccination and health-related issues
- Periodic studies and assessments to inform vaccine purchase and effective delivery
- Operation of two call centres for information dissemination and complaints management;
- Trainings and post training support for vaccinators, technical and managerial cadres engaged in the vaccination campaign; and
- Administrative cost: including hiring of Environmental and Social Specialists, salaries and emoluments, and stationery and office equipment.

Based on preliminary assessments, the implementation of these activities may give rise to substantial environmental an social concerns including Occupational health and safety (OHS); Community health and safety (CHS); Disposal of hazardous waste and contaminated fluids from quarantine and isolation centers, laboratories, and screening posts; life and fire safety considerations and general waste. Key social risks and impacts include the potential for excluding vulnerable and marginalized groups, and the risks associated with the use of security personnel to protect logistics, storage and personnel during the COVID vaccination program. The GoN National Vaccine Deployment Plan, guided by the WHO's Fair Allocation Framework, provides guarantees to ensure to equitable and priority access to vaccines for vulnerable and marginalized populations including migrant populations. With funding from this AF, government intends to extend vaccination to adolecents (12years and above). Risks related to AEFIs for this demography is uncertain as there is little information in terms of how they may react to the vaccines. These risk factors are described in detail in section 5 of this ESMF.

2.1 Eligibility criteria for exclusion of subprojects

To avoid and/or minimize the adverse impacts of the project, some activities are predetermined as ineligible for project financing and support due to their potential for causing high social and environmental risks and impacts that are diverse, irreversible, or unprecedented. These activities have been noted in the project's Environmental and Social Commitment Plan (ESCP) and include,

- Activities that may cause long term, permanent and/or irreversible (e.g. loss of major natural habitat) adverse impacts.
- Activities that may affect lands or rights of indigenous peoples or other vulnerable minorities.
- Activities that may involve permanent resettlement or land acquisition or adverse impacts on cultural heritage.
- Major civil works (including construction, expansion, and/or rehabilitation of physical infrastructure requiring significant use of casual labor (more than 10 persons) which may result in setting up labor camps. Minor civil works and renovations are acceptable and within the scope of the parent project.
- Activities or events (including consultation sessions) that present highest likelihood of COVID-19 transmission among workers and community members; and
- Activities that have a high probability of causing serious adverse effects to human health and/or the environment (e.g. construction of effluent treatment plants, related to general wastewater treatment).

3. Policy, Legal and Regulatory Framework

All activities under the project will be operationalized in a way that they are consistent with the relevant laws, regulations, policies of the GoN, the World Bank's Environmental and Social Standards (ESSs), the World Bank Group's Environmental, Health and Safety Guidelines, and relevant World Health Organizations (WHO) protocols on COVID-19. In particular, the relevant aspects of these laws, regulations, standards, and protocols will serve as the framework and guidance for the assessment and management of the environmental and social risks and impacts of the project activities. Under the parent project, the National Health Care Waste Management, Standards and Operating Procedures (October 2020) provided the source guidance for the collection, segregation, transport, and disposal of medical waste and will be extended to cover healthcare waste management under the AF. Specific laws and regulations that relevant to the management of risks and impacts in this project are highlighted below.

3.1 Relevant National Laws and Regulations and International Treaties

Table 3-1 outlines specific country laws and regulations that are considered relevant for the technical operation of the project as well as provisions for managing the social and environmental impacts of project activities. In addition to these laws and regulations, the MoHP's Gender Equity and Social Inclusion Strategy in the Health Sector (2008) informs issues around equity and assess for vaccines under the project.

Table-1 List of National Laws and Regulations

- Constitution of Nepal, 2015
- Environmental Protection Act, 2019
- Environmental Protection Rules, 2020
- National Environment Policy, 2019
- Minimum Service Standard for a different level of HCFs, 2019
- Public Health Service Act, 2018
- Infectious Disease Act, 1964
- Guideline for Health institutions establishment, operation, and upgrade standard, 2014
- Health Care Waste Management Guideline, 2014
- Solid Waste Management Act, 2011
- Solid Waste Management Rules, 2013
- Local Government Operation Act, 2017
- Industrial Enterprises Act, 2016
- National Health Policy, 2018
- National Health Communication Policy, 2012
- Security of the Health Workers and Health Organizations Act, 2010
- National Foundation for Upliftment of *Adivasi/Janajati* Act, 2002
- National Human rights Action Plan, 2005
- Labor Act, 2017
- Labor Rules, 2018
- Child Labor (Prohibition and Regulation) Act, 2000
- Drug Act, 1978

3.2 Relevant World Bank Environmental and Social Standards

Based on the World Bank's environmental and social risks review, the following ESSs of the Bank are relevant for managing the environmental and social impacts of the project. The standards set out key requirements for MoHP to identify, assess, plan, and implement mitigation measures against environmental and social risks and impacts in the project:

- ESS1 Assessment and Management of Environmental and Social Risks and Impacts
- ESS2 Labor and Working Conditions
- ESS3 Resource Efficiency and Pollution Prevention
- ESS4 Community Health and Safety
- ESS7 Indigenous Peoples
- ESS10 Stakeholder Engagement and Information Disclosure

Information about the WB's ESSs and their relevancy is further detailed at Annex VI. The relevancy of the other ESSs will be reviewed throughout project implementation.

3.2.1 Comparison of GoN regulatory framework against the World Bank's Environmental and Social Standards

Table 3-2 below presents a comparison of GoN legal and policy requirements and the World Bank ESSs, with recommendations to bridge the identified gaps. The recommendations are confined to the scope of the environmental and social risks of the project and consider mitigation measures that are implementable and can be monitored and reported on. The table helps the MoHP and its operational departments to clearly identify areas where internal country regulations fall short in responding to its environmental and social commitments and obligations under this project.

Table 2 Comparison between GoN and World Bank policies and recommendations

World Bank ESS requirements		Nepal's policy framework and requirements	Gaps between ESSs and GoN & legal and policy requirements	Recommendations
ESS	Requirements			
ESS 1: Assessment and management of Environmental and Social Risks and Impacts	ESS 1 requires the Borrower will assess, manage and monitor the environmental and social risks and impacts of the project throughout the project life cycle to meet the requirements of the ESSs in a manner and within a timeframe acceptable to the Bank. The Borrower will: (a) Conduct an environmental and social assessment of the proposed project, including stakeholder engagement; (b) Undertake stakeholder engagement and disclose appropriate information following ESS10 (c) Develop an ESCP, and implement all measures and actions set out in the legal agreement including the ESCP; and (d) Conduct monitoring and reporting on the environmental and social performance.	Environment Protection Act, 2019; Environment Protection Regulation, 2020; and National Environmental Impact Assessment Guidelines, 1993 are legal instruments for the requirements of Environmental and Social Assessment of any development projects. The subprojects need to be categorized based on Schedule 1, 2 & 3 of Rule- 3 of EPR 2020. Based on the categorization, further actions will be undertaken as stipulated in the EPR 2020.	The Schedules are based on activity type, threshold/size, as well as location. The Potential risks associated with the project are omitted in GoN policy. No provision for associate projects/activities; large projects can be split into smaller projects to avoid full EIA study. The scope of EIA may not cover all WB ESSs. EPA/EPR does not allow the use of other types/forms of assessments. Does not emphasize the hierarchy of measures in ES risk management planning	An E&S Screening shall be carried out followed by detailed ESMP for sub-projects to bridge the gap between WB and GoN requirements. The ESMPs will be implemented to address notable adverse environmental impacts that arise during the operations of the project. The ESMP so prepared shall be made an integral part of the bidding document so that suppliers and contractors shall adhere to the provisions prescribed in the ESMP during the execution of the project. *[Ref: Environmental Protection Act, 2019; Environmental Protection Rules, 2020; and WB ESS 1]*
ESS 2: Labor and Working Conditions	There are numbers of requirements of ESS2 under the following heading:	Labor Act (2017) and Child Labor Act (2001).	Current OHS legislation is not adequate (No separate legislation on OHS.	Ensure that health workers and frontline staff working on project are informed

World Bank ESS requirements		Nepal's policy framework and requirements	Gaps between ESSs and GoN & legal and policy requirements	Recommendations
ESS	Requirements			
	Working conditions and management of worker relationships. Protecting the workforce. Grievance mechanism. Occupational Health and Safety. Contracted workers. Community workers; and Primary supply workers.		Current OHS mandate is provided only in Section 12 of the Labor Act) and Section 64 of Labor Rules, 2018 Lack of industry-specific standards (DoLOS has so far issued only one directive: OHS Directive for Brick Workers) There are no specific requirements addressing concerns related to direct suppliers.	about their rights as per national law and this ESS. Health workers shall not be forced to participate in vaccine exercise. Use existing administrative procedures or Provide GRM suitable for addressing complaints and concerns of health workers on this project. Provide and ensure that workers use appropriate PPEs, including providing training on use and safe disposal of PPEs. *[Ref: EHS 2.7 in table 3-3 below]*
ESS 3: Resource Efficiency and Pollution Prevention and Management	The Borrower shall consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention.	Environment Protection Act (EPA), 2019 (Section 7). National Ambient Air Quality Standards (2003). Water Resources Act (1992). Water Resources Rules (1993). Drinking-Water Regulation (1998).	Regulatory lapses on resource use efficiency in projects	Resource efficiency and pollution prevention in any development project need to be emphasized during the design and implementation of the projects. Different standards related to environmental protection and resource efficiency need to be strictly enforced. Where feasible (technical and financial), use climate friendly technologies (e.g. Use low GHG emissions incinerators) to

World Bank ESS requirements		Nepal's policy framework and requirements	Gaps between ESSs and GoN & legal and policy requirements	Recommendations
ESS	Requirements			
		Drinking-Water Quality Standards Water Quality Guidelines for the Protection of Aquatic Ecosystem		reduce pollution through burning of medical waste. Reference shall also be made to **Annex V** WHO; WB EES3: Resource Efficiency and Pollution Prevention and Management while preparing ESMPs; EHS 1.4 on water conservation. These references contain relevant guidelines on: A. The transportation and management of samples, medical goods and expired chemical products. B. Energy and resource efficiency during refurbishment and operation of health facilities C. International Best Practice Guidance for Environment Management in HCFs.
ESS 4: Community Health and Safety	As part of ESS1, borrower is required (i) to assess the potential risks and impacts of the project on the health and safety of affected communities, (ii) apply concept of universal access to the design and operation of project-financed infrastructure, (iii) ensure that	The EPA Act identifies the direct and indirect human health impact as issues that must be assessed and addressed when developing or operating projects.	There is limited coverage as scope of typical ESIAs do not necessarily include community safety issues. Public health legislations do not specifically impose requirements	Assessment of community health and safety and propose mitigation measures to be applied in the project. Hazard assessment of the potential for uncontrolled reactions such as fire and explosions and actions to manage these materials safely and the safety

World Bank ESS requirements		Nepal's policy framework and requirements	Gaps between ESSs and GoN & legal and policy requirements	Recommendations
ESS	Requirements			
	project-financed services (in this case, vaccines) are safe for the public, (iv) avoid or minimize potential community exposure to communicable diseases. Other requirements relate to the need for emergency preparedness and response and to assess and manage risks related to (i) life and fire safety on account of storage and use of therapeutic oxygen in health facilities and (ii) the use of security personnel in project operations where relevant.	EPA Section 7: Nobody shall create pollution in such a manner as to cause significant adverse impacts on the environment or likely to be hazardous to public life and people's health.	for development and infrastructure projects.	specifications for therapeutic oxygen when stored and used in health facilities. Security Risk Assessment and Management focused on appropriate training to military personnel compatible with ESS4 requirements, including the alignment with the UN Voluntary Principles on Security and Human Rights (https://www.voluntaryprinciples.org/)
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	The relevance of this standard for managing risks in this project relates to: Avoiding adverse impacts on IPs; Ensuring meaningful consultation and participation of IPs in the vaccination and other project activities (obtaining broader community support for the project); Ensuring that IPs can access vaccines equitably; and putting in place a robust grievance redressal mechanisms with due	National Foundation for the Development of Indigenous Nationalities Act (2002) ILO Convention 169 (2007)	The provision of FPIC and broad consent from the IP&C is absent. Nonetheless, the GoN has ratified ILO 169 and the United Nations Declaration of Rights of Indigenous People (UNDRIP). The GoN is in the process of preparing the National Action Plan to implement the international commitments. GoN does not have a standalone policy on Indigenous Peoples.	The conditions that merit the requirement for FPIC is not envisaged in this project. Nonetheless, the relevant aspects of the ESS7 will be adapted to the circumstances of the project and relate to the need for full and meaningful consultation with IPs and ensuring that they receive equitable access to vaccines and project-financed benefits.

World Bank ESS requirements		Nepal's policy framework and requirements	Gaps between ESSs and GoN & legal and policy requirements	Recommendations
ESS	Requirements			
	regard for the traditional structure and governance of IPs. Circumstances requiring Free, Prior and Informed consent (FPIC) (displacement and relocation of IPs, extending adverse impacts on lands and natural resources under traditional ownership or customary use, and activities with material consequences on the identity and socio-cultural lives of IPs are not envisaged in this project).			
ESS 10: Stakeholder Engagement and Information Disclosure	There are numbers of requirements of ESS 10 under the following headings: Engagement during project preparation (Stakeholder identification and analysis; Stakeholder Engagement Plan; Information disclosure; Meaningful consultation); Engagement during project throughout the project life cycle and; Grievance mechanism;	The EPR as amended requires consultations during scoping and a public hearing is required in all projects that require EIA but not for projects that require IEE.	Does not require stakeholder analysis and preparation of the stakeholder engagement plan Does not provide for continuous stakeholder engagement/consultations beyond the EIA process during construction and operation phase	A stakeholder engagement plan has been developed for this project. SEP will be implemented to ensure disclosure of relevant information to the general population and tailor-focused specific messages and medium to prioritize IPs and vulnerable populations.

3.1 World Bank Group's Environmental, Health and Safety Guidelines

In addition to the relevant ESSs, the Environmental, Health, and Safety (EHS) Guidelines of the World Bank Group contain technical reference documents with industry-specific examples of Good International Industry Practice (GIIP) in planning, operating and managing environmental and social impacts of various infrastructure investments.[3] Specific elements of these guidelines as outlined in the table 3-3 below are relevant to this project have been drawn to inform this ESMF and the MoHP's Infection control and Medical Waste Management Plan (ICWMP).

Table 3-3 EHS Guidelines and applicability

EHS guidelines	Relevance for managing risks in the project
EHS 1.5 – Hazardous Materials Management	These guidelines apply to projects that use, store, or handle any quantity of hazardous materials (HazMats), defined as materials that represent a risk to human health, property, or the environment due to their physical or chemical characteristics. The guidelines and the Infectious Disease Act, 1964 of Nepal are applicable to the project and serve as source reference for the Nepal Health Emergency Operation Centre (HEOC) – the lead implementing unit of the MoHP – for this project as they put in measures to manage the hazardous and infectious health care waste in this project.
EHS 2.5 – Biological Hazards	Biological agents can cause illness or injury when people are repeatedly exposed to them. The guidelines provide measures for preventing biological hazards and are directly relevant to managing hazardous waste generated from quarantine and isolation centers, laboratories, contaminated fluids, and infected materials such as reagents, syringes, empty vials and laboratory solutions.
EHS 2.7 – Personal Protective Equipment (PPE)	The use of appropriate Personal Protective Equipment (PPEs) along with facility control and safety systems protect workers against exposure to workplace hazards. Requirements for use of PPEs have been imposed on health workers and volunteers that will participate in project-funded and associated activities.
EHS 3.3 – Life and Fire Safety	This relates to fire and other safety standards for in use, storage and handling of therapeutic oxygen in hospital facilities in the treatment of COVID-19.
EHS 3.5 – Transportation of Hazardous Materials	This guidance note provides procedures for transportation of hazardous materials which needs to comply with local laws and international requirements applicable to the transport of hazardous materials. In the light of these guidelines, the NVDP (2020) provides appropriate operating procedures for the transport, storage, and use of vaccines and medical supplies in this project.

[3] See footnote 2

EHS 3.6 – Disease Prevention	This guidance note provides intervention for the control of the communicable diseases and vector borne diseases at the project level. The recommended interventions includes surveillance and active screening and treatment of workers, training health workers, providing health services, educating project personnel and area residents on risks, prevention, and available treatment; monitoring communities during to detect and treat cases and following safety guidelines for the storage, transport, and distribution of pesticides to minimize the potential for misuse, spills, and accidental human exposure.
The World Bank Group EHS Guidelines for Health Care Facilities are also applicable and can be used for guidance for the design and operation of HCFs	This guideline includes information relevant to the management of EHS issues associated with health care facilities (HCF) which includes a diverse range of facilities and activities involving general hospitals and small inpatient primary care hospitals, as well as outpatient, assisted living, and hospice facilities. Ancillary facilities may include medical laboratories and research facilities, mortuary centers, and blood banks and collection services.

3.2 World Health Organization Protocols

Since the outbreak of the COVID-19 pandemic in March 2020, the World Health Organization (WHO) has produced and promoted several protocols aimed at guiding global and national response to the pandemic.[4] The protocols include up-to-date information and guidance which are relevant to the implementation of the project activities and in some cases, offer directions on the assessment and management of risks and impacts such as infection prevention and control, healthcare and medical waste management, and specific considerations for occupational health and safety of healthcare workers that are actively involved in country response to the pandemic. In the design of this ESMF, the MoHP drew guidance from the following WHO protocols and guidelines.

3.3.1 Infection Prevention and Control/WASH

The WHO's interim guidance on *Water Sanitation hygiene and waste management for the COVID-19 virus* provides good practices related to infection prevention as well as water, sanitation, hygiene, and waste management relevant to viruses including coronavirus.[i] The guideline recognizes the potential for virus transmission using water and faecal matter as transmitting agents, and recommends the need for frequent and correct hand hygiene, safe management of drinking water, water disinfection, wastewater treatment and faecal sludges as additional ways to contain the virus and stop human-human transmission. These recommendations are fundamental in the design of this ESMF and are already applied at various project-funded hospitals, laboratories, and quarantine facilities; and will be used to guide vaccination activities under the AF.

[4] *See https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance-publications?publicationtypes=d198f134-5eed-400d-922e-1ac06462e676*

In instances where a suspected novel coronavirus (nCoV) is suspected, the WHO's guidelines on *Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected* is relevant to this project.[ii] This document emphasizes the need for early identification and screening of suspected cases and the use of standard precautions (i.e., hand hygiene, use of PPEs, isolation and treatment) in handling suspected and confirmed cases. These strategies informed Contact Tracing and Case Investigations under the parent project and will continue to be applied in the implementation of this AF. Further, this document provides all the practical steps that should be followed inside and outside of health care institutions for containment through infection prevention practices. Relevant aspects of this guideline have been drawn to inform the ESMPs in Annex III.

Infection Prevention and Control for the safe management of a dead body in the context of COVID-19: This guidance is relevant to the project, and as part of this ESMF, used to provide recommendations for supervisors of health care facilities, mortuaries, religious and public health authorities, and families responsible for the management of the dead bodies of persons due to suspected or confirmed COVID-19. This guidance document has been used to inform risks communication under component 2 of the project, making sure that information disclosure encompasses the need for standard and safe ways to handle dead bodies of COVID-19 victims.

3.3.2 Occupational health and safety, Health Worker exposure risks assessment and management, Worker rights and responsibilities

WHO Coronavirus (COVID-19) guidelines on health worker rights and responsibilities and the Rational use of PPEs by health workers both present complementary material to the Nepal *Minimum Service Standards for different levels of HCFs (2019)* on issues related to occupational health and safety for health workers and highlights responsible conduct (including the use of PPEs) that is required of health facilities and workers to ensure safe practices at work in the context of COVID-19.

3.3.3 Laboratory testing and quarantine of individuals

WHO interim guidance for laboratory testing[iii] is a good guide for laboratory technicians and workers involved in laboratory testing of COVID-19 and provides guidance for the safe and rational use of testing kits and reagents to achieve maximum certainty of the testing. *The WHO interim guidance for laboratory biosafety related to COVID-19 virus*[iv] complements laboratory testing with additional guidance for biosafety when performing various testing and handling of the COVID-19 virus. It further provides the safe handling approaches during packaging and shipment of specimens to the reference laboratories. This guidance along with the *Consideration for quarantine of individuals in the context of containment for coronavirus disease (COVID-19)*[v] provide guidance for participating MoHP agencies in this project to manage risks and impacts pertinent in this project.

3.3.4 Risk Communication and community engagement

In this ESMF, and indeed the project, the *WHO Risk Communication and Community Engagement (RCCE) readiness and response to the 2019 novel coronavirus (2019-nCoV)*[vi] is directly relevant to the design and implementation of risk communication and community engagement under component 2. This guideline along with *the* GoN's National Health Communication Policy (2012) constitute the bases upon which the MoHP plans and implements health risks communication and community engagement related to

coronavirus and other infectious diseases. Under the parent project, the National Health Education, Information and Communication Center with technical support from WHO and UNICEF developed and are implementing series of communication materials (Youtube broadcast, FAQs, and Fliers). A joint communication plan has been prepared and used to address advocacy, social mobilization and community engagement, risk communication, media engagement, feedback mechanisms and social listening, capacity building of key stakeholders, Adverse Events Following Immunization (AEFI) crisis communication and coordination and collaboration between technical and operational agencies. Materials towards these will be prepared, tested and deployed using various channels and platforms to promote information and respond to concerns about the COVID vaccine when implementing the AF.

3.3.5 Vaccine readiness assessment

As noted in section 2 above, vaccine purchase and deployment are significant transactions to be financed under the AF. In line with the *WHO Diagnostics, therapeutics, vaccine readiness for COVID-19 (November, 2020)*[vii], the GoN conducted vaccine readiness in December 2020 and January 2021 using the VIRAT and then VIRAT-VIRAF 2.0 tools, identified critical bottlenecks that may impede the country's proposed COVID-19 vaccination program, and has worked with development partners –UNICEF, WHO and the World Bank – to develop a National vaccine deployment and vaccination plan. The results of the assessment have enabled the government to assess the availability and nature of critical vaccination infrastructure in the country, institutional readiness, and potential operational, environmental, and social concerns that require safeguarding before and during the vaccination program. Relevant information from the readiness assessment report has been used to inform this ESMF and the project SEP and relate to contextual, geographical and cultural issues underpinning access to healthcare and vaccine hesitancy.

3.3.6 COVID-19 vaccine: supply, storage and deployment supply and logistics guidance

An interim guidance on COVID-19 vaccine supply, storage and deployment was jointly published by WHO and the United Nations Children's Fund (UNICEF) in February 2021 seeking to help countries to develop and strengthen supply chain mechanisms to receive, store, distribute and manage COVID-19 vaccines and their ancillary products; distribute COVID-19 vaccines from port of entry up to the most remote vaccination sites; ensure the quality, efficacy, proper tracking, reporting of vaccine utilization and safety of COVID-19 vaccines throughout the supply chain; assess, design and implement appropriate waste management mechanisms to safely treat and dispose waste while protecting the environment and populations ; strengthen appropriate cold chain and logistics requirements, including reverse logistics and provide tools to support country readiness activities. This guidance document informed the government's NVDP and will remain relevant to the implementation of the AF and this ESMF.

3.3.7 Surveillance of adverse events following immunization

The potential for adverse events (example, serious illness, contraindications, or even death) to occur following vaccination is recognized in the proposed COVID-19 vaccination exercise. Considering these risks, the MoHP guided by *WHO Global Manual on Surveillance of Adverse Events Following Immunization, 2014*[viii] set up a surveillance and monitoring mechanism to accompany the vaccination exercise. This mechanism is described in the NVDP and further highlighted in the risks screening section of this ESMF. It addresses the investigation of adverse events, how to analyze surveillance data, causality assessment

and how to respond to such events, including communication. It also includes a description of the most common vaccine reactions as demonstrated in recent vaccine pharmacovigilance. As part of this AF, such surveillance activities will extend to vaccination of adolescents to ensure that potential AEFIs among this demography are tracked and addressed.

3.3.8 Relevant WHO guidelines on medical oxygen fire risk

Technical guidance notes for health workers and other personnel on the safety and mitigation measures that need to be adhered to when dealing with medical oxygen have been prepared by WHO. Medical oxygen, either in liquid or gas form, is an oxidizing agent that can result in a fire or explosion if not handled properly. Based on these guidelines the MoHP may adopt i) Oxygen cylinder safety ii) Oxygen risk management guidance for participating MoHP agencies for establishing L&FS risk management procedures in place.

4. Environmental and Social Baseline

This section describes the country context of Nepal within which the government's COVID-19 response is operationalized, and focuses on the environmental and social baseline conditions that are relevant to understanding the ways by which the positive impacts of the project can be enhanced and/or ways to mitigate the adverse environmental and social impacts that project activities may induced. Given that the project has a national footprint with various activities expected across the country, the section is limited to discussing only key environmental and socioeconomic characteristics at the national, provincial and local levels, particularly where those are relevant to helping establish the potential adverse impacts of project activities. The baseline presented below is drawn from secondary data.

4.1 Geography and Environmental baseline

Nepal has a total land area of 147,181 sq.km, and an estimated population of over 28 million. The country lies in a sub-tropical mountainous region at 26°22' to 30°27' N latitudes and 80°4' to 88°12' E longitudes, with an altitude ranging from 90m to 8,848m. The country is landlocked, bounded by India in the East, West, and South, and China in the North. The border with India is poorly controlled allowing unrestricted cross-border movements for Nepali and Indian citizens. The climate of the country is within the subtropical monsoon climate. From epidemiological perspectives, migration across the border presents challenges to the government's COVID control measures as migrant labor – potentially infected with the virus – can incubate and transmit the disease. With monsoons, planned vaccination schedules can also be disrupted as heavy rains combined with landslides impede travel and access to remote locations in the mountains and forested areas.

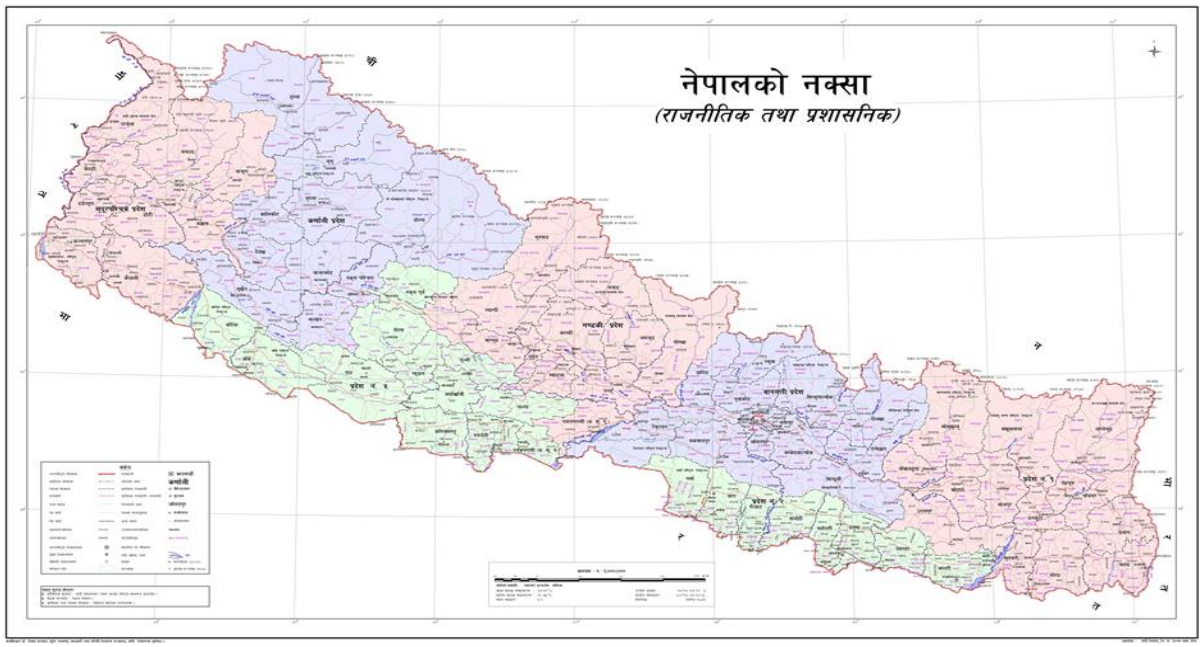

Figure 4-1: Provincial Map of Nepal

4.1.1 Water Resources

Nepal is drained by three main rivers the Koshi, Narayani (Gandak), and Karnali, running southward across the strike of the Himalayan ranges forming transverse valleys with deep gorges. The watershed of these rivers lies partly in the Himalayas and Tibet. It is estimated that there are altogether 6,000 rivers (including rivulets and tributaries) in Nepal. All the rivers ultimately become major tributaries of the Ganges River in northern India. Rapid urbanization has outrun the capacity of municipal infrastructure resulting in uncontrolled waste disposal and sanitation failures and pollution of water bodies. The Kathmandu Valley, a hotspot of COVID-19 transmission, which is drained by Bagmati River is polluted as harmful and unregulated discharge of municipal, industrial, and household waste accumulates along the channel. The state of pollution underscores the need to implement adequate measures in the project to contain hazardous and medical waste discharge from quarantine and vaccination facilities.

4.1.2 Air Quality

Air quality, especially in the major cities of Nepal, is poor due to rapid and haphazard urbanization in the last few decades. Road expansion increased vehicular traffic, open burning, unplanned infrastructure give rise to air high pollution. Average annual ambient concentrations of fine particulate matter (PM2.5), the component of air pollution that is most strongly linked to health outcomes, reach 50 to 80 µg/m3, considerably exceeding the World Health Organization (WHO) guidelines of 10 µg/m3. $PM_{2.5}$ has been shown to cause cardiovascular and pulmonary diseases and lung cancer in adults, and lower respiratory infections in both children and adults. The sources of $PM_{2.5}$ pollution vary across the country, with transportation, household biofuel use, construction, and brick ovens being the predominant sources in

the Kathmandu Valley. The health care waste in most hospitals is usually burnt either openly or in drums or small incinerators releasing harmful toxins and greenhouse gases with deteriorating impact on ambient air quality.

4.1.3 Sanitation

Access to sanitation facilities is basic and varies across the country. In the hills and mountainous regions, access to potable water and proper sanitation is inadequate, suggesting the need for vaccination teams to plan and move with water when visiting those areas. Water, sanitation and hygiene related ailments and diseases are among the 10 diseases in Nepal. Sanitation at health care facilities are also inadequate. One in six (16%) hospitals and clinics do not have access to potable water and nearly a third (29%) do not have safe toilets. Before the outbreak of COVID, eight out of ten (81%) hospitals and clinics did not have soap or hand washing facilities. Inadequate WASH facilities can harm human health by contributing to diarrhea and other health problems, especially among young children.[5]

4.1.4 Solid Waste Management

Solid waste management is problematic in urban Nepal. A study by the ADB in 2013, estimated that waste from households contributes about 50 to 75 percent of the total solid waste generated in urban areas. Based on this study, average solid waste generated in municipal environments stood at 317 g/capita/day. Waste collection by municipalities authorities exists. However, inadequate capacity of landfill sites means that most of the collected waste is dumped along the Bagmati and Bishnumati rivers and other non-engineered sites. Municipalities have not been able to manage solid waste effectively and efficiently because of a lack of technical and human resources, diagnostic assessment, data, and proper planning. This raises concern for the project to find alternative ways by which solid waste from the project can be disposed.

4.1.5 Health Care Waste Management

Health care waste management in Nepal is governed by the National Health Care Waste Management Standards and Procedures (2020), the Minimum Service Standards for different levels of HCFs (2019), and the National health policy (2019). The government's institutional arrangements for implementing the standards and procedures included a dedicated unit – Health Emergency and Operations Centre - backed by annual budget to oversee the management of healthcare waste. Together these policy and regulatory frameworks have instituted minimum requirements for managing waste generated at healthcare facilities and providing guidance in terms of waste management systems that should be in place at various levels of HCFs.

According to the Department of Health Services (DoHS), there are 125 public hospitals, 198 primary health centers, and 3808 health posts nationwide.[6] In addition, there are 11,974 primary health care outreach clinics. Approximately 10,520 tons of non-hazardous healthcare waste and 3,094 tons of hazardous health care waste are generated by all hospitals in Nepal every year.[ix] Waste generated per bed

[5] World Bank. 2019. "Nepal Environment Sector Diagnostic: Path to Sustainable Growth Under Federalism

[6] Department of Health Services, Annual Report 2074/2075 (2017/2018), accessible at: https://dohs.gov.np/wp-content/uploads/2019/07/DoHS-Annual-Report-FY-2074-75-date-22-Ashad-2076-for-web-1.pdf

per day is about 1.35 kg, 37 percent of it being hazardous.[7] Whilst the basic regulatory framework for managing healthcare waste exist, collecting, segregating, transporting and disposing these volumes of waste is considered problematic. A joint facility monitoring conducted by WHO/UNICEF found that only 1 percent of health care facilities in Nepal provided basic waste management services (defined as separating the waste into three bins and safely treating and disposing of the waste). [8] The reach of the regulatory framework for managing healthcare waste is limited to facilities in urban centers with limited oversight on the facilities located in at the provincial and local levels. Adding to this limitation, the nature of healthcare waste disposal is also problematic. The current trend of health care waste disposal in Nepal is either burn or bury method. WHO/UNICEF's monitoring found that the majority of the hospital waste are typically segregated in various bins and disposed at the municipality collection centers or burnt and buried. Most health care wastes, they found, were not disinfected before transportation to waste disposal sites and very few Health Care Institutions conducted environmental assessment of their waste disposal sites. With this baseline, it is imperative for the project to take measures to avoid and minimize medical waste generation and implement adequate measures to dispose off medical waste safely.

As of now there are no external waste management facilities, such as third-party sanitary landfills, incinerators, or wastewater treatment plants. Some pilot initiatives have been successfully implemented, such as No-burn technologies and Zero-waste programs in Civil Service Hospital, Bhartapur Hospital, Bir Hospital and Gangalal Heart Hospital, and requires additional investments to sustain and expand. The GIZ is currently providing technical assistance and support in the areas of healthcare waste management which is considered critical for waste management in this project. Other emerging healthcare waste management technologies in the country include using steam-based autoclave to treat infectious waste prior to disposal.

[7] Source: https://www.washinhcf.org/wp-content/uploads/2019/03/HCWM-workshop-report.pdf
[8] https://www.unwater.org/publication_categories/whounicef-joint-monitoring-programme-for-water-supply-sanitation-hygiene-jmp/

4.1.6 Life and Fire Safety

Nepal has not had an episode of fire out-break in either a COVID-19 designated or non-COVID health facility through the pandemic period. Most of the large HCF and hospitals in Nepal have some form of firefighting systems, albeit not adequate. However, risks associated with life and fire safety are exacerbated with the cold chain equipment, electrical equipment and use of therapeutic oxygen in health facilities, vaccine storage or vaccine distribution equipment and storage of vaccine waste/safety box. The CERHSP project has supported establishment of seven PSA Oxygen Generation Plants, one per province, and their operationalization, maintenance, and management through UNOPS. The project while procuring and establishing Oxygen generation plants have followed the national and international protocols to assess the L&FS risk and accordingly mitigation measures have been applied in line with requirements of WBG General EHS guidelines. Also, none of the oxygen plants are inside the hospitals. The sheds that have been built for housing the plant are at a safe distance from the hospital, following the L&FS protocols that UNOPS (is the UN agency which supplied the Oxygen plants) follows for its building housing oxygen supplies which are fairly adequate. It is imperative that the provincial hospitals where such oxygen generation plants are established, be strengthened with institutionalization of appropriate fire safety measures.

4.1.7 Labor & Working Conditions

Nepal's policy and regulatory framework on labor and working conditions are evolving and responding to contemporary labor-related concerns at the workplace. The Labor Act 2017 and Labour Regulations 2018 (as amended) have addressed previous weakness in the Labor Act 1992 and Labor Rules 1993 with new requirements for employers to insure workers against medical liabilities and worksite accidents. Occupational and health safety issues included in the Labour Act 2017 are requirements for preparation of Workplace Health and safety Policy, formation of Safety and Health Committee at sites hosting 20 or more workers, appropriate safety and health arrangement, disseminating relevant information and training related to safety, prevention of communicable diseases by barring the workers from joining their regular duty until the treatment is completed, providing expenses for the investigation and treatment of any work-related diseases. COVID-19 Epidemic and the Systematic Captivity (lockdown) Criteria for Public Health, 2077 recently approved highlights about the public health criteria, rules and regulations to be followed in all the institutions and workplaces such as social distancing, workplace safety, wearing of masks, and frequent hand washing or use of sanitizer where hand washing facilities are unavailable.

Despite the relatively improved regulatory landscape, studies have shown that there is inadequate attention to OHS practices in Nepal. OHS practices remain ineffective mainly due to inadequate legal system, limited knowledge, poor implementation and resource constraints.[9] Studies done on the transport sector to understand contractors' OHS practices noted improvements in OHS practices, however, general understanding of OHS amongst contractors is limited and thus

[9] Rudra Prasad Gautam and Jiba Nath Prasain, 'Current Situation of Occupational Safety and Health in Nepal: A Study Report' (Kathmandu: General Federation of Nepalese Trade Unions (GEFONT), 2010

implementation of OHS procedures is weak.[10] OHS procedures require adequate surveillance of the work environment and risk assessment, which are often not undertaken in Nepal. General understanding of OHS among the employers as well as workers is limited to providing PPEs to workers, regardless of whether they wear the appropriate protection for the work. Labor camps and constructions sites often do not have basic minimum provisions such as health and sanitation facilities.

Under the parent project, the MoHP has provided required PPEs for healthcare workers, provided training and orientation on OHS issues, and continue to receive technical support and training from GIZ.

4.1.8 Current Approach for Managing COVID-19

The GoN is following a six-T strategy for the prevention and containment of COVID-19:

i. *Travel Restrictions:* national and international restrictions have been put in place to disrupt spread and transmission of the virus.
ii. *Testing:* The MoHP has now expanded testing capacity and is now carrying out testing in all the seven provinces of Nepal. A total of 82 public and private laboratories offer RT-PCR tests for COVID-19
iii. *Tracing:* All those who may have come in contact with the infected people are being contacted, traced and tested.
iv. *Tracking:* The MoHP is closely tracking those infected so that the infection does not spread to others.
v. *Treatment:* All COVID patients are treated free of charge in public health facilities.
vi. *Together:* the GoN adopts a collaborative approach leverage technical expertise and financial wherewithal of various development agencies to respond to COVID-19

The parent project supported equipment, consumables, supplies for public laboratories to undertake COVID-19 RT-PCR tests, PPEs, as well as operational costs, training, monitoring and evaluation and surveillance studies. The GoN offers free RT-PCR tests through its network of 48 public sector laboratories, which accounts for about 58 percent of daily tests for persons presenting COVID-19 symptoms. It is reported that the national process for the collection and transportation of samples to testing facilities is based on the WHO interim guidance 19 March 2020, laboratory testing for coronavirus disease (COVID-19) in suspected human cases. Table 4-1 below shows province wise distribution of RT-PCR testing laboratories for COVID-19 tests with a cumulative capacity to do over 20,000 tests per day.

[10] ILO 2017, Contractor's Occupational Safety and Health Practices Under Strengthening the National Rural Transport Proramme (SNTRP) Analysis I (Unpublished).

Table 4-1: Distribution of RT-PCR testing laboratories in Nepal

Province	RT-PCR Testing Laboratories					
	Public		Private		Total	%
	N	%	N	%		
Province 1	4	50	4	50	8	9.6
Province 2	5	83.3	1	16.7	6	7.2
Bagmati	21	46.7	24	53.3	45	54.2
Gandaki	2	66.7	1	33.3	3	3.6
Lumbini	6	54.5	5	45.5	11	13.3
Karnali	4	100	0	0	4	4.8
Sudurpaschim	6	100	0	0	6	7.2
Total	48	57.8	35	42.2	83	100

4.2 Social and economic baseline

4.2.1 Population and Demography

The Population Census of 2011 determined the population of Nepal to be 26.6 million, with an average annual population growth rate of 1.4 percent. The census estimated that there are about 5.66 million households in the country with an average household size of 4.8 persons. Approximately 1.8 million (6.7%) live in the mountains area, 11.5 million (43.2%) in the hills, and 13.3 million (50.1%) in the Terai. As shown in table 4-2 below, the Bagmati province has the highest population of 5.5 million, followed by province 2 with 5.4 million. The Bagmati province also has the highest number of households with 1.27 million households, followed by Province 1 with 992,000 households and province 2 with 932,000 households. Seventeen percent of the population live in urban areas, and the rest living in remote, rural, and mountainous areas. The country is demographically young with 63.7 percent of the population aged below 30 years, suggesting that the population at risks of developing serious illness following COVID-19 infection is minimal in the country. These statistics partly informs the government's planning for COVID-19 purchases and deployment under the AF.

Table 4-2 Areas, Population, and sex ratio at province level

Provinces	Capital	Area (km2)	No. of Districts	Population (2011)	Sex ratio Per 100 females	Total Households (HH)	Average HH size
Province No. 1	Biratnagar	25,905	14	4,534,943	91.48	992,445	4.57
Province No. 2	Janakpur	9,661	8	5,404,145	101.18	932,308	5.80
Bagmati Pradesh	Hetauda	20,300	13	5,529,452	98.77	1,270,797	4.35
Gandaki Pradesh	Pokhara	21,504	11	2,403,757	83.08	578,219	4.16
Province No. 5	Butwal	22,288	12	4,741,716	90.73	885,203	5.08
Karnali Pradesh	Birendranagar	27,984	10	1,327,957	95.69	298,359	5.26
Sudurpashchim Pradesh	Dhangadhi	19,539	9	2,552,517	91.25	469,971	5.43
Nepal		**147,181**	**77**	**26,494,487**	**94.16**	**5,427,302**	**4.88**

Source: Population Census 2011, CBS

4.2.2 Human Development

Nepal's HDI value for 2018 is 0.579, as per Table 4-, which places the country in the medium human development category. Based on the global HDI index ranking, the country ranks 147 out of 189 countries and territories, a position it shares with Kenya. Between 1990 and 2018, Nepal's HDI value increased from 0.380 to 0.579, an increase of 52.6 percent. Similarly, life expectancy at birth increased by 16.1 years, its mean years of schooling increased by 2.8 years, and its expected years of schooling increased by 4.7 years.

Table 4-3 Nepal's HDI trends based on consistent time series data

Year	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (2011 PPP$)	HDI value
2010	67.6	12.0	3.3	2,002	0.527
2015	69.5	12.2	4.7	2,496	0.568
2016	69.8	12.2	4.9	2,486	0.572
2017	70.2	12.2	4.7	2,639	0.574
2018	70.5	12.2	4.9	2,748	0.579

Source: Human Development Report 2019, UNDP

4.2.3 Poverty

Poverty in Nepal is decreasing but remains a significant development challenge. Sustained economic growth in the last decade, backed by increased investment in social and economic infrastructure, and robust incremental increase in the flow of remittances has resulted in increased access to income and basic needs. The Living Standard Survey 2011 showed that 25.16 percent of the total population lived below the poverty line. Recent official statistic suggest a further decrease in the population living below the poverty line to 18.7 percent for the FY2018 (see Table 4-). Despite declining poverty, inequality is high and underpins imbalances and inequities in access to economic opportunities and distribution of resources including health services. Without adequate safeguards, access to COVID-19 information and vaccines, especially in provinces with high poverty and illiteracy rates, could be compromised.

Table 4-3 Province-wide poverty and life expectancy in FY 2018

	Province1	Province 2	Bagmati	Gandaki	Province 5	Karnali	S. Pashchim	Nepal
Population under absolute poverty (%)	12.4	19.8	15.3	15.5	18.2	28.9	33.9	18.7
Life expectancy	70.7	67.8	70.7	71.7	69.3	66.8	68.6	69.7

Source: National Planning Commission, approach Paper of 15th Five Year Plan, 2019

4.2.4 Employment

The Labor Force Survey 2017 found that the rate of unemployment and underemployment in Nepal stood at 11.4 percent and 40 percent respectively. The informal sector employs 41 percent of the working-age population and the employment to population ratio was 34.3 percent. Province 2 has the highest level of unemployment with one-fifth of its working population being out of work. Bagmati province, hosting Kathmandu as the capital city contributes approximately 35 percent to the national economy and has the lowest rate of employment among the provinces. The concentration of government services and better economic opportunities in the Kathmandu area is a major pull factor for in-migration and urbanization in the province. However, overstretched public facilities and limited economic opportunities turn to create or exacerbate slum poverty in and around the city. In the context of COVID, the urban poor suffer significant impacts of government response measures including 'lockdown' and physical distancing orders as they are less skilled, less capable, and are less likely to support their basic needs without working.

4.2.5 Migration, remittances, and epidemiology

In the South Asia region, Nepal is considered as a major worker exporting country with about 6 million Nepali youths working abroad. Unemployment, under employment, poverty and lack of appropriate skills contribute to a thriving cross-border migration with the majority of the Nepalese youth migrating to neighboring countries and the middle east for jobs. India, Kuwait, Malaysia, and United Arab Emirates are among the top labor destinations for Nepali workers with approximately 2 million and 70,000 workers hosted in India and Kuwait respectively. This trend of migration is a major source of remittance for the

country and a significant contributor to growth and poverty reduction. As noted in Table 4-4 below, Remittances remain the backbone of the economy for the last several years which has greatly contributed to maintaining a healthy domestic demand and foreign currency reserves, despite weak exports. COVID-induced disruptions, job losses amid shrinking economic activities in the labor recipient countries has forced many workers to return home, with the expectation that a reduced flow of remittance will put additional significant strain on the economy. Following the onset of COVID, many returnees especially those coming from highly infected countries (e.g. India) are suspected to have been carriers of the virus, thus contributing to infections in Nepal. As vaccines become available, the NVDP (2020) expresses the government's strategy to prioritize the vaccination of migrant labor to help control infection rates.

Table 4-4 Contribution of remittance to the economy

Remittance Income	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Amount (NRs in billion	543.29	617.28	665.06	695.45	755.10	897.30
Change in %	25.0	13.6	7.7	4.6	8.6	18.8
Ratio to GDP	27.7	29.0	29.5	26	24.9	25.9

Source: Nepal Rastra Bank

4.2.6 Ethnicity and ethnic minorities

Nepal has a significant ethnic and social diversity, with approximately 123 languages spoken in different parts of the country. Predominantly Hindu, the country has a mix of ethnic groups, with a highly stratified and hierarchical social structure. The National Foundation for Development of Indigenous Nationalities Act 2002 recognizes 59 different nationalities as indigenous nationalities, representing 37.2 percent of the total population. The majority of the indigenous nationalities are socially, economically, politically, and educationally marginalized. The Human Development Index shows considerable disparities among various nationalities/ethnicities and castes and communities. Based on the social and economic features, the National Federation of Indigenous Nationalities (NEFIN) further classified 59 different nationalities into five broad categories, as presented in Table 4- below. The 2011 census listed the population belonging to 125 castes and ethnic groups, including 63 indigenous peoples; 60 castes, including 15 Dalit castes; and 3 religious' groups, including Muslim groups. Based on the 2011 census, about 86 percent of the population follows Hinduism, 8 percent follow Buddhism and 3 percent practice Islam.

Table 4-5 Sub-categorization of the 59 different indigenous nationalities

Region	Endangered	Highly Marginalized	Marginalized	Disadvantaged	Advantaged
Mountain	-	Shiyar, Shingsawa (Lhomi), Thudam	Bhote, Dolpo, Larke, Lhopa, Mugali, Topkegola, Walung	Bara Gaunle, Byansi (Sauka), Chhairotan, Marphali Thakali, Sherpa, Tangbe, Tingaule Thakali	Thakali
Hill	Bankariya, Hayu, Kusbadiya, Kusunda, Lepcha, Surel	Baramu, Thami (Thangmi), Chepang	Bhujel, Dura, Pahari, Phree, Sunuwar, Tamang	Chhantyal, Gurung (Tamu), Jirel, Limbu (Yakthung), Magar, Rai, Yakkha, Hyolmo	Newar
Inner Terai	Raji, Raute	Bote, Danuwar, Majhi	Darai, Kumal	-	-
Terai	Kisan, Meche (Bodo)	Dhanuk(Rajbansi), Jhangad, Santhal(Satar)	Dhimal, Gangai, Rajbanshi, Tajpuriya, Tharu, Rana Tharu	-	-
Total	**10**	**12**	**21**	**15**	**2**

Source: National Federation of Indigenous Nationalities, 2002

Dalits, approximately 13 percent of the population and living in the hills and terai regions, were historically categorized as 'untouchables', placing them at the bottom of the Hindu caste hierarchy. The living conditions among the Dalits are below the national average, as the community suffers economic, social and political deprivations. For example, in 2011 the incidence of poverty among Dalits was 43.6 percent in the hill areas and 38.2 percent in the Terai, compared to Newars (10.3%) and hill Brahmins (10.3%). Similarly, 15 percent of hill Dalits and 44 percent of Terai Dalits were landless. The poverty index for Dalits is 47 percent compared to the national average of 31 percent.

The MoHP is aware that ethnicity, religion, caste systems, education and the prevailing structural and socio-cultural marginalization are underpinning factors influencing vaccine acceptability and hesitancy and considers them as critical issues in its COVID-19 vaccine deployment plan. As noted in the NVDP

(2020), the government intends to immunize all Nepalese population regardless of gender, ethnicity, religion, or cast. The government has also emphasized, backed by the project SEP, that participation in the vaccination program are voluntary and dependent on individual's volition. The implementation of the SEP along with this ESMF will also disclose relevant information and engage leadership of indigenous populations to address concerning social risks associated with the AF. In recognition of the multiple languages spoken in Nepal, communication materials and disclosure of relevant information will also consider translation into the widely spoken Nepali language and localized languages (e.g. Nepali, Awadhi, Newari, Maithli, Bhojpuri and English) in the provinces.

4.2.7 Persons with disabilities

According to the Population Census 2011, the overall prevalence of disability is 2 percent with 2.2 percent prevalence of male disability and 1.7 percent prevalence for females. Physical disability is the most common type of disability and represents over 33 percent of total disabilities. Physical disability and blindness/low vision combined account for more than 50 percent of total disabilities. Disability in rural residents was more prevalent (2.1%) compared to disability in their urban counterparts (1.2%). The prevalence of disability was considerably higher in Mountain areas (3.0%) compared to Hill area (2.2%) and in the Tarai (1.6%). More than one-third of the disabled are less than 30 years old and only one-fourth of disabled persons are aged 60 years or more. The percentage of persons with a disability in the economically active age group (15 – 59 years) was higher in urban areas (59.5%) than in rural areas (56.1%). The proportion in older ages (60 and above) was higher among women (27.2%) compared to men (24.3%). Disability was significantly higher among illiterates (3.87%).

4.2.8 Education

The literacy rate of the population of age over 5 years is 68.3 percent. The male literacy rate is 76.8 percent and the female literacy is 60.5 percent. The literacy rate for the population of 6 years and above is estimated to be 69.8 percent while the adult literacy rate of 15 years and above population is 66.8 percent. In 2016/17, 31.9 percent of the population were attending school and 26.6 percent had never attended school. The gross enrolment ratio (GER) of primary, lower secondary, and secondary level of schooling in 2016/17 were 118.5, 93.4, and 85.9 respectively. The GER of the primary level in urban areas was 120.4, and for the rural area it was 117.4.

Table 4-6 Province-wide Details of Different Levels of Schools

Provinces	Total school	Basic (1-5)	Basic (6-8)	Basic (1-8)	Secondary (9-10)	Secondary (11-12)	Secondary (9-12)
Province No. 1	6,742	6,679	3088	6703	1,784	679	1,829
Province No. 2	4,042	3,985	1,547	3,993	817	403	848
Bagmati Pradesh	6,911	6795	3,806	6,823	2,656	986	2,793
Gandaki Pradesh	4,311	4,273	1,928	4,316	1,268	566	1,288

Province No. 5	5,698	5,632	2,555	5,652	1,494	533	1,524
Karnali Pradesh	3190	3,134	1,213	3,170	627	232	627
Sudurpashchim Pradesh	4,161	4,121	1,892	4,136	997	403	1,010
Nepal	35,055	3,4619	16,029	34,793	9,643	3,802	9,919

Source: Ministry of Education, Science and Technology, FY 2018/19

4.2.9 Health sector

Nepal is steadily increasing its critical health infrastructure and facilities. As noted in table 4-7, the number of hospitals increased by 17 percent along with a 23-percentage increase in the number of doctors during the last six years.

Table 4-3 Number of Health Facilities and the Health workforce

Type of Health Facility	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Hospital	107	116	116	116	123	125
Primary health	215	215	216	200	203	203
Health Post	2,175	3,790	3,883	3,803	3,803	3,805
Hospital beds	7,750	7,640	7,748	8,172	8,172	8,172
Doctor	2,154	4,457	2,550	2,550	2,640	2,640
Nurse/ANM	9,535	20346	20423	20510	20510	20,653
Health Assistant (HA/AH)	11,551	11,551	12,646	12,646	14,347	14,347

Source: Ministry of Health and Population, FY 2018/19

Amongst the seven provinces, the Bagmati province host the majority of health infrastructure, with the largest pool of public hospitals, as presented in

Table 4- below. Province 2, lagging in many socio-economic indicators, has the highest number of health posts. Karnali province has the lowest number of public hospitals and health posts. Amongst the private health facilities, Bagmati province alone hosts 64 percent of total such institutions of the country.

Table 4-8 Number of Health Facilities

	Country	Province 1	Province 2	Bagmati Province	Gandaki Province	Province 5	Karnali Province	S. Paschim Province
Public Hospitals	125	18	13	33	15	20	12	14
Primary Health Care Center	198	40	32	43	24	30	13	16
Health Posts	3808	648	745	640	491	570	336	378
Private Facilities	1822	133	169	1163	100	168	46	43

Source: HMIS 2017/18, MoHP

A total of 10.5 million outdoor health services were provided by all government, private, and community health institutions of Nepal by mid-March of FY2019. Altogether 483,000 patients were admitted to the hospitals, and 875,000 thousand had received some sort of emergency services.

These health infrastructure and personnel constitute the foundational bases for the government's vaccination programs including the COVID-19 vaccination to be funded under the AF. In December 2020 and January 2021, the MOHP conducted assessment of the vaccine readiness using VIRAT and VIRAT-VIRAT 2.0 tools.

4.2.10 Vaccine deployment

Overall, the GoN through its regular health services has over 15,835 Expanded Immunization Programs (EPIs) focused on child health and primary healthcare. Experience through these programs are being harnessed to support planning and implementation of the proposed COVID-19 vaccination program. As the COVID-19 vaccine is new and targeted at the adult population, past vaccination behaviors in the country as well as the social, economic, and geographic characteristics of the area may facilitate vaccine acceptability, skepticism and undermine participation. In the provinces, low adult literacy especially for women, high poverty rates, and inadequate access to healthcare services remain major constraints. The project will be guided by the WHO's National Deployment and Vaccination Plan (NDVP) and WHO's Fair Allocation Framework with considerations for vulnerable and marginalized groups.

With the increasing availability of safe and effective vaccines to prevent and minimize spread of the pandemic, Nepal has developed a strong vaccine portfolio through bilateral diplomacy with friendly nations and neighbors, direct procurement from manufacturers using domestic resources and Credits,

and leveraging grant and cost-share allocations under the COVAX AMC facility. Over 25.4 million doses of vaccines[11] are already delivered to Nepal as of November 19, 2021 with a pipeline of approximately 21 million doses to be delivered before June 2022. IDA financing has been used to procure Moderna vaccines through the COVAX cost-share option, with delivery scheduled in Q1, 2022. Additionally, contract negotiations are ongoing for procurement of Pfizer vaccines, partially financed by the first AF and remainder through this second AF. As of October 26, 2021, 6.7 million (30.8 percent) population has been fully vaccinated and 8.6 million (39.7 percent) population is partially vaccinated. It is expected the IDA financed vaccines will be able to vaccinate at least 16.5 percent of the Nepali population, prioritizing adolescents >12 years, to bring them safely back to school and curb learning losses exacerbated by COVID-19. Medical and chemical wastes (including water, reagents, infected materials, etc.) from the laboratories, quarantine, vaccination centers and screening posts to be supported (drugs, supplies and medical equipment) can have substantial environmental impacts and with human consequences. Solid wastes generated from medical facilities and discharge of contaminated water and fluids, chemicals and other hazardous materials, and other waste from laboratories and quarantine and isolation centers including of sharps, used in diagnosis and treatment can endanger health and safety of local communities. With the proposed vaccination program, the quantum of medical waste in the form of used vials and syringes may increase and overwhelm the prevailing limited capacity for management of health care waste. There are challenges with the management of health care waste generated through the vaccination campaign which include the limited reach of the National Health Care Waste Management, Standards and Operating Procedures (October 2020), inadequate logistical and financial resources to implement the procedures as well as to monitor compliance with them. There have been difficulties in managing medical waste thus far. The amount of waste decimated and safely disposed is far less than the waste generated. Ministry continues to improve its autoclaving and other waste management systems to manage this waste. The MoHP is working with technical partners, such as WHO, UNICEF, UNDP and GIZ as well as potential co-financiers of the vaccine program, such as ADB to facilitate a complementary support to ministry in ensuring full compliance with national guidelines for HCWM for the COVID-19 vaccination program. With support from GIZ, the MOHP is improving its capacity to manage waste from medical facilities. As noted above, a national healthcare waste management standard and procedures has been developed. Yet, these procedures are only being implemented at selected hub facilities located at the central and provincial capitals, leaving out other facilities doted across the country due to budget and resource constraints. Project supported hospitals and health facilities will follow the procedures outlined in the ESMF, WHO COVID-19 Guidelines. The hospitals will apply the National Health Care Waste Management standards in disposing of used vials, syringes, and other vaccine-related waste. In line with the NDVP, the project will provide funds and logistics (under component 1 and 3) that will allow health facilities to implement health care management procedures and adhere to the procedures outlined in the NDVP – mainly using incinerators to dispose of waste.

4.3 Challenges and lessons learnt from the parent project

As noted in the project appraisal document of the AF, the parent project is progressing satisfactorily. With funds and technical support, the MoHP has enhanced Case Investigation and Contact Tracing (CICT) at the national and provincial levels; enhanced capacities for isolation (7,984 beds); increased the national COVID-19 testing capacity from one laboratory (national public health laboratory) to 101 laboratories across the country; and financed over 2,944 intensive care beds and 3,234 high dependency units in selected public hospitals for treatment of afflicted patients. Over 25.4 million doses of vaccines[12] are

[11] Astrazeneca: 6.83 million doses; Verocell: 17.02 million doses; Janssen: 1.53 million doses and Pfizer-BionTech: 0.1 million doses
[12] Astrazeneca: 6.83 million doses; Verocell: 17.02 million doses; Janssen: 1.53 million doses and Pfizer-BionTech: 0.1 million doses

already delivered to Nepal as of November 19, 2021 with a pipeline of approximately 21 million doses to be delivered before June 2022. As of October 26, 2021, 6.7 million (30.8 percent) population has been fully vaccinated and 8.6 million (39.7 percent) population is partially vaccinated. Risk communication messages are delivered to the public through multiple channels including media briefings, radio, televisions, mobile and online applications, and posters at locations in cities and villages across the country. In addition, two call centers have been established to share reliable information about COVID-19 with citizens and to handle complaints made through the call centers. At the last project implementation support mission, the overall project performance was rated satisfactory, albeit with a moderate satisfactory rating for the project's environmental and social (E&S) performance.

The key environmental and social challenges facing the parent project, as noted above, relate to the inability of the MoHP to apply the National Health care Waste Management Standard and Operating Procedures across the country due to delayed decision making, fiscal and logistical constraints; the ministry's capacity constraints in implementing and reporting on the ESCP, SEP, and ESMF; and emerging community perceptions of COVID-19. Logisitical issues have undermined Case Investigation and Contact Tracing (CICT). The HEOC has competitively recruited an Environment and Social Safeguards Specialist who will support the HEOC and offer technical assistance in management of E&S risks. On community perception issues, the SEP expresses the need for key messages to address to address ill-informed perceptions, address hesitancy, and generate community support for project activities.

5. Potential Environmental and Social Risks and Mitigation

This section identifies and describes the potential environmental and social risks and impacts of the eligible activities that will be supported or financed by the project (see section 2 for project description). The risks are identified based on the experiences of the parent project and preliminary risks assessment of the additional activities that will be financed by the AF. As noted in the introduction section, the E&S issue related to the parent project are addressed in the previous ESMF which was disclosed in August 2020, updated and thereafter disclosed on March 24, 2021 (English) and May 19, 2021 (Nepali) respectively. This revised ESMF will be disclosed on the MOHP site as well as the World Bank external website. In undertaking the preliminary assessment, the MoHP considered the proposed activities in section 2 against the baseline (or the recipient environment) of the project (in section 4) and used the relevant policy and regulatory instruments (is section 3) as guiding framework. The section first summarizes the potential benefits and adverse impacts of the project, and considers specific the inherent environmental and social risks and impacts along distinct stages of the project (i.e. *Planning and procurement stage*, *Operations stage* and *Decommissioning)* where such risks and impacts may become apparent. The project is not expected to finance construction and/or expansion of physical infrastructure. As such risk considerations involving construction activities are not included in this ESMF.

Combined with the parent project, this AF will enhance Nepal's systems for disease surveillance, containment and control of infectious diseases; and specifically finance the procurement and deployment of at least ten million doses of safe and effective vaccines. The vaccine beneficiaries include frontline healthcare and social workers, elderly people (55+ years), persons 40+ year with co-morbidities, migrants and refugees and other interested persons in age group 15-39 years. The National Vaccination and Deployment Plan is being revised to include adolescent age groups >12 years with vaccines that are safe to be administered to this age-group.

Overtime, the rest of the population will be vaccinated as more vaccines are procured. The AF will dedicate additional funds towards training vaccination teams and undertake risk communication. COVID-19 risk communication and community engagement are being amplied and providing relevant information to the general population in multiple languages. Specific anticipated benefits of the project include:

- Improved access to better medical and emergency facilities and service providers at project-funded healthcare and laboratory facilities,
- Improved access to reliable information on COVID-19 and other infectious disease,
- Prevention and minimization of the spread of infectious disease through better resourced national disease surveillance system (including the capacity of the country's health services to identify, trace, test, isolate and treat COVID-19 cases),
- Improved protection of the population against COVID-19 through immunization, and
- Improved capacity of the GoN to prevent and control disease epidemics.

Despite these general positive impacts, the implementation of some project ctivities are expected to create and/or exacerbate existing environmental and social impacts with adverse consequences on the population.

5.1 Potential adverse environmental and social impacts

Experience from the parent project and preliminary risks assessment of the AF, suggest the following imminent adverse environmental and social impacts of the project. As required by the World Bank's ESS1, and depending on their significance, each of these risks will be thoroughly assessed and impact mitigation measures implemented throughout the project life.

5.1.1 Environmental risks and impacts

i. Occupational health and safety (OHS) concerns to ***direct*** health workers, vaccination and medical crews, laboratory technicians, and drivers involved in direct project activities, i.e. collection, handling and testing of specimen, carrying out vaccinations, handling dead bodies from quarantine and isolation facilities;

ii. Disposal of hazardous/heath care waste generated from isolation centers, laboratories, and screening posts could include contaminated fluids and infected materials such as reagents, syringes, and lab solutions. Without proper safeguards, this waste may be disposed off improperly resulting in contamination of soil and water bodies, and injury to waste pickers.

iii. Management and disposal of medical waste from the vaccination program such as syringes and used vials as well as biohazards and contaminated fluids and water from quarantine and isolation facilities and mortuaries.

iv. Air pollution and GHG emissions from inadequate burning of hospital waste

v. Life and Fire Safety concerns with storage and use of therapeutic oxygen in treatment of COVID-19

5.1.2 Social risks and impacts

i. Concerns for community health and safety (CHS) which may result from improper disposal of medical waste (e.g. syringes, empty vials, used cotton, used PPEs and sharps) on open waste dumps and discharge of contaminated water that may undermine community health and safety, cause injury to waste pickers, and contaminate soil and surface water.

ii. Potential for social tension which may arise from misinformation related to the efficacy of the vaccine, eligibility criteria for prioritization to receive vaccines and other perceived inequities, as well as restrictions on movement and in-person gatherings to control the spread of the virus which may raise privacy concerns and interpreted as intrusion of certain cultural practices.

iii. Potential for exacerbating existing trends of marginalization against the poor, vulnerable (including the elderly, persons with pre-existing conditions, people with disabilities and indigenous peoples) and lower-caste groups in terms of access to vaccines and to relevant information and healthcare services which could deepen inequalities and undermine the objectives of the project.

iv. Potential for adverse effects following vaccination. This may include serious illness, contraindications or even death. This risk of serious adverse effects rarely occurs and is thus considered low risk in this project; and

v. Potential for excess and arbitrary use of force by security personnel who may be deployed to secure vaccine transportation and storage and to protect vaccine teams.

Other social risk issues may include the likelihood of violating ethical considerations during surveillance, epidemiological investigations, and case management as well as the potential for vaccine skepticism and misconceptions especially among indigenous population due to poor or distant communication and engagement and the limitation of technology-based information dissemination.

The magnitude and scale of each of the above risks and impacts will be carefully assessed based on the nature of activity, the location, and the stage at which the activity is being considered. The Table below summarizes the potential risks and impacts and measures which will be applied to mitigate the risks. The risk mitigation measures are consistent with the risk mitigation hierarchy of the World Bank's ESS1, emphasizing the need to avoid impacts first, and where unavoidable minimize, mitigate, and compensate for residual impacts.

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
1.0	**Planning and procurement stage**		
a	Procurement of general goods and supplies (including hygiene materials, and consumables)	• Concerns for energy saving and power consumption, • Adverse impacts on human health, air pollution and emission and generation of hazardous, • General waste.	Adapt sustainable procurement methods, ensuring that goods or services meet environmentally sustainable thresholds[13]: • Ensure the life cycle impacts of the item were considered (i.e. what processes were used to create it, what environmental impacts does it have when used, what will happen at the end of its productive life) • Ensure the supplier provides *Material Data Sheet* to inform handling • Ensure the required ESHS measures are incorporated into the ESHS specifications of the procurement documents and contracts with contractors and supervising firms • Ensure that the contractors and supervising firms comply with the ESHS specifications of their respective contracts • Where the project includes procurement of electrical equipment which can be used in existing HCF premises with the oxygen therapy settings MOHP should hire before launching bid, suitable qualified L&FS professional acceptable to the Bank to assess the L&FS risk and propose mitigation measures in line with local building codes, local fire department regulations.
b	Vaccine procurement, transport, and storage	• Potential to procure unapproved vaccines. • Damage to vaccines in transit; • Potential for diversion of vaccines;	• Procure only vaccines meeting the World Bank Vaccine Approval Criteria. • Monitor and track vaccine transport with GPS to deter and detect diversion. • Use the relevant provisions of the GoN's NVDP (2021) to guide vaccine logistics planning (see section 5, NVDP, 2021) • Train operators of project-financed equipment and vehicles on safe operation of equipment and vehicles and the national road safety regulations

[13] Environmentally sustainable procurements integrate the concern for social, economic, and environmental issues, and involves thinking broadly about objectives, considering long term as well as short term effects, assessing indirect as well as direct effects.

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
		• Potential failure of refrigerators during storage; • risk of injury to vaccination transportation teams	• Monitor cold-chain temperature using an electronic temperature monitoring device (fridge tag) with capability for manual extraction of data.
c	Public health communication, risks communication and Community engagement	• Possible blind spot on the information needs of vulnerable groups and indigenous peoples, • risks of limited information or exclusion of IPs and vulnerable groups,	• Ensure meaningful consultation with representatives from vulnerable groups including women, persons with disabilities, and indigenous peoples in decision making on COVID-19 planning and response. • Ensure that public health emergency mitigation plans are a gender inclusive and account for the needs of indigenous peoples and other vulnerable groups. • Refer to relevant WHO guidelines on risks communication and community engagement.
d	Planning, locating and installation of vaccination booths including the temporary use of public and private properties such as schools, hospitals, and community centres.	• The potential to choose locations which are not accessible to remote locations. • Medical waste management and disposal issues • Information about vaccination booths and locations may not be available to rural populations	• Consider central and accessible locations to remote population • Identify and engage with authorities of public facilities including schools, community centers • Incorporate considerations for waste segregation, treatment, and appropriate disposal. • Include information on location of vaccination booths in public disclosure sessions and communication materials (e.g. FAQs) • Identify, engage, and inform IPs groups, LGBTI+ groups, on the locations of vaccination centers and vaccination arrangements.
e	Procurement and installation of laboratory equipment, supplies and goods at emergency rooms, clinics, and other medical facilities,	Surfaces of imported materials may be contaminated and handling during transportation and result in spreading COVID.	• Mandatory hand hygiene practices for workers handling equipment. • Ensure that adequate handwashing facilities with soap (liquid), water, and paper towels for hand drying (warm air driers may be an alternative), plus the closed waste bin for paper towels are available. • Ensure that awareness campaigns include standard COVID-19 prevention measures including washing hands regularly with soap, maintaining physical

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
			distancing, wearing face masks as appropriate, and avoiding hand contact with the face, eyes, and nose • Carry out disinfection using 0.1 percent chlorine solution, where necessary. • While procuring electrical equipment which can be used in existing HCF premises with the oxygen therapy settings MOHP will hire before launching bid, suitable qualified L&FS professional acceptable to the Bank to assess the L&FS risk and propose mitigation measures in line with local building codes, and local fire department regulations.
f	Purchase of PPE for healthcare staff and workers in health facilities, laboratories, waste disposal sites.	Potential for procuring sub-standard or inadequate use of PPEs which may compromise infection control measures; Potential for improper disposal of used PPEs.	• Purchase only standard PPEs (e.g. OSHA standards) • Train workers on the proper use of PPEs, disinfection, reuse, and disposal of PPEs using WHO Guidance on rational use of PPEs) • Institute quality control measures for all PPE that are procured • Institute and train workers on mandatory use of PPEs in active work areas.
g	Hand hygiene stations	Increased risk of transmission of virus due to inadequate handwashing facilities	• Health facilities should have adequate handwashing facilities with liquid soap, running water, and paper towels for hand drying (warm air driers may be installed) • Ensure the availability of closed waste bins for paper towels. If water and soap hand washing facilities are not possible, alcohol-based hand rubs may be provided • Follow the WHO hand hygiene protocols.
h	Waste contaminated with COVID-19	The collection, processing, treatment, and disposal of health care wastes become a vector for the spread of the virus.	• Healthcare waste produced during the care of COVID-19 patients should be collected safely in designated containers and bags, labeled, treated, and then safely disposed off. • Avoid open burning and incineration of medical wastes to control emission of GHG, dioxins, furans, and particulate matter

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
			• Consider the use of alternative waste treatment methods, e.g. autoclave which is being used in some health facilities in Nepal. Steam treatment on-site is preferred. Once treated, sterile/non-infectious waste may be mutilated and disposed of in suitable waste facilities. • Institute periodic testing and validation of treatment processes as a quality control measure • Refer to WHO Safe management of wastes from health-care activities for further guidance[14] and Nepal's Healthcare waste management standards and procedures, 2020.
i.	Identification and diagnosis process	Collection of samples and testing for COVID-19 could result in the spread of disease to medical workers or laboratory workers or during the transport of potentially affected samples.	• Collection of samples, transport of samples, and testing of the clinical specimens from patients that meet suspect case definition should be performed following WHO interim guidance Laboratory testing for coronavirus disease 2019 (COVID-19) in suspected human cases[15]. • 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. National guidelines on laboratory biosafety should be followed. WHO interim guidance for laboratory biosafety related to 2019-nCoV[16]. • For general laboratory biosafety guidelines, refer to the WHO Laboratory Biosafety Manual, 3rd edition[17]. Also, refer to ESS2 and ESS4.

[15] https://apps.who.int/iris/bitstream/handle/10665/331329/WHO-COVID-19-laboratory-2020.4-eng.pdf?sequence=1&isAllowed=y
[16] https://www.who.int/docs/default-source/coronaviruse/laboratory-biosafety-novel-coronavirus-version-1-1.pdf
[17] *https://www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/*

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
j	Location, type, and scale of healthcare facilities and associated waste management facilities including waste transport routes, and isolation centers	• OHS concerns to frontline healthcare workers and staff especially on specimen collection and handling, exposure to infectious diseases • Dust and noise during rehabilitation/civil works • Management of health care waste generated from isolation centers, laboratories, and screening posts could include contaminated fluids and infected materials like reagents, syringes, lab solutions, and disposal will be an issue • Risk of excluding vulnerable groups including women, indigenous peoples, people with disabilities, in regard to project planning and decision making • Health facilities are inaccessible to vulnerable groups such as the elderly or people with disabilities	• Screen each HCF for potential environmental and social risks per World Bank Group EHS Guidelines, WHO COVID-19 Guidelines[18], and the screening form contained in Annex II. • Determine the need for design changes in the facility or its operation such as ICUs, isolation facilities, structural and equipment safety, fire and life safety equipment, universal access, nosocomial infection control, and medical waste disposal. • Identification the scope of works expected (i.e. wards rehabilitated into ICUs, installation of box chambers, installation/augmentation of water supply and installation of sanitary stations, rehabilitation, or installation of medical waste incinerators. • Incorporate universal access standards • Determine and plan for utility services (power and water) • Identification of how such works might interfere with the normal operation of the HCF • Refer to the WBG EHS guideline[19] and Relevant WHO guidelines on medical oxygen fire risk[20]. The healthcare waste produced during the care of COVID-19 patients should be collected safely in designated containers and bags, labeled, treated, and then safely disposed of using steam-based technology (autoclave) Reference shall be made to WHO Safe management of wastes from health-care activities[21] . Needle cutters will be used in all location where needles are used to ensure that these sharps are destroyed at the source of generation and then autoclaved and disposed of in designated sharp pits

[18] https://apps.who.int/iris/bitstream/handle/10665/331603/WHO-2019-nCoV-SARI_treatment_center-2020.1-eng.pdf?sequence=1&isAllowed=y
[19] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines
[20] https://www.who.int/health-topics/oxygen#tab=tab_1
[21] https://www.who.int/water_sanitation_health/publications/wastemanag/en/

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
		• Social unrest/tensions due to the establishment of quarantine and isolation facilities neighborhoods • Attacks on health workers involved in vaccination distribution.	• Preparation of a site-specific ESMP based on the Generic ESMP presented and template for Planning & Designing Stage, Template for Construction Stage, Template for Operation Stage, and Template for Decommissioning Stage are presented in Annex III. • Ensure the participation of vulnerable groups and IPs in the planning and decision-making process. • Ensure that precautionary measures are taken as recommended by the WHO Interim Guideline for the quarantine of individuals. • Establish a Grievance Redress Mechanism (GRM) for the public to facilitate uptake and redress of complaints. This should be complemented for thorough information disclosure and community consultation aimed at addressing potential causes of social unrest. • Leaders, civil society organizations and community groups should be engaged early in the process to facilitate the process and dispel any misinformation • Regular communication with the community in the vicinity about the procedures put in place to address the risks of COVID-19. Communication materials and approaches should be clear and designed to ensure that the vulnerable and marginalized groups such as indigenous peoples, people with disabilities easily understand. A communication strategy will be guided by the WHO Risks Communication and Community Engagement (RCCE) Protocol, Nepal's National Health Communication Policy 2012, and the Stakeholder Engagement Plan (SEP) prepared for the project. • The updated Stakeholder Engagement Plan conveys messages that will help discourage attacks against health workers. • Consultation and engagement activities will deploy key messages on priority population (inclusion and exclusion criteria) and vaccination centres and procedures

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
2.0	**Operations stage (including vaccination campaigns)**		
a	Operation of healthcare facilities including: management systems, waste management procedures and standards.	• OHS concerns involved in delivery and storage of medical goods, holding samples, pharmaceuticals, vaccines, reagents, and hazardous materials. • Potential injuries resulting from handling sharps, improper use of PPEs, and poor handling of waste. • Risks of COVID-19 infection among health workers resulting from sample handling and testing. • potential for marginalizing vulnerable groups and persons with disabilities from accessing health services, isolation and quarantine services. • Rise in tensions at isolation and quarantine centers due to lack of basic facilities, such as food, water and lodging and infection prevention and control measures • Rise in social tensions due to the establishment of mandatory isolation and quarantine centers proximity to	• Screen HCF for environmental, medical, and social risks. • Assess the adequacy of the healthcare waste management system of the HCF material delivery, waste generation, handling, disinfection and sterilization, collection, storage, transport, and disposal and treatment work and recommend proper measures as necessary • Classify and quantify the HCW (infectious waste, pathological waste, sharps, liquid, and general waste) following WBG EHS Guidelines for Healthcare Facilities. • Describe applicable performance levels and/or standards and monitor the compliance of the existing management system including L&FS action plan • Review onsite waste management and disposal regularly and provide weekly training on protocols contained in the ICWMP. • HEOC in coordination with relevant units of MoHP will audit any off-site waste disposal every month and institute remedial measures required to ensure compliance; and • Explore ways to minimize, reuse, and recycle waste whenever practical in the COVID-19 context. • Ensure quarantine facilities are located with considerations for access to basic needs and facilities such as food and water. For further detailed information refer to the "Infection Control and Waste Management Plan (ICWMP) Template" provided in Annex IV • The project will take all measures to ensure proper disposal of medical waste that will be generated during the operation of health facilities to avoid community health and safety issues. Also, the project makes sure the

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
		a residential area, school, public spaces, and park. • Community health and safety issues due to improper handling and disposal of medical waste, including syringes and other medical waste used in the vaccination program	implementation of WHO's Safe Management of Wastes from Health-care Facilities and the government standard on Hospital Waste Water. • Hospitals will apply the National Health Care Waste Management, Standards and Operating Procedures in disposing of used vials, syringes, and other vaccine related waste. • Take necessary measures to ensure the safety of health workers as prescribed by WHO and several directives issued by the government such as Pandemic Health Services and Use of PPE. • Strengthen patient and public complaint (GRM) services to collect, address complaints, and prevent social unrest and mismanagement, • Early communication with community leaders, civil society, and community groups to determine location for quarantine facilities, pre-empt and address community issues and dispel any misinformation. • Regular communication with the community in the vicinity about the procedures put in place to address the risks of COVID-19. Different channels of communication should be used to optimize impact. Refer to WHO's RCCE protocols.
b	Vaccine prioritization and distribution	• Inequitable access to COVID vaccine for indigenous communities and other vulnerable groups (women, Dalit, and religious minorities • Vaccine skepticism and misconceptions about the benefits and risks of the COVID-19 vaccine, affecting uptake	• GoN has developed and adopted NVDP (2020) with adequate provisions for vaccinating the eligible population including IPs and vulnerable groups. • GoN COVID-19 Vaccine Advisory Committee (COVAC) is undertaking consultations with key development partners (i.e. WHO, UNICEF, the World Bank Group, and GAVI) as well as health and other essential workers as part of COVID-19 vaccine preparedness and roll out. • The Stakeholder Engagement Plan (SEP) has been updated to include strategies and plans for creating awareness about COVID-19 vaccines and to help generate vaccine acceptability by reversing rumors and addressing fears.

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
		• Potential for attacks on vaccine deployment teams due to perceived discrimination	• The SEP will convey messages that discourages attacks against health workers and will clarify that no forced vaccination is supported by the project. (See recommendations at column 'e' below in relation to management of security risks.)
c	Running a vaccination session	• Potential for exclusion of vulnerable groups • Potential for elite capture resulting in neglect of prioritized population • Adverse effects following immunization	The NVDP (2021) outlines the procedures for running vaccination sessions.
d	Surveillance of Adverse Events Following Immunization	Occurrence of Adverse Events Following Immunization (AEFI) including contraindications which may cause serious illness in vaccine recipients	Refer to section 10 of NVDP (2021) which provides guidance and outlines measure to response to the potential occurrence of Adverse Events Following Immunization (AEFI)
e	Use of military or security personnel to protect vaccine facilities and vaccination personnel	Potential for excess or arbitrary use of force by security personnel, and other risks associated with using security personnel such as sexual exploitation and abuse (SEA) and sexual harassment (SH)	Assess the risks and impacts of engagement of the Security Personnel, and implement measures to manage such risks and impacts, guided by the principles of proportionality and Good International Industry Practice, and by applicable law. Ensure standards, protocols and codes of conduct are followed for the selection and use of security personnel, and ensure that such personnel have not engaged in past unlawful or abusive behavior, including sexual exploitation and abuse (SEA), sexual harassment (SH) or excessive use of force;

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
			Ensure that such Security Personnel is adequately instructed and trained, prior to deployment and on a regular basis, on the use of force and appropriate conduct (including civilian-military engagement, SEA and SH, and other relevant areas) ; Implement key messages related to use of security as planned for in the SEP; and Ensure that any concerns or grievances regarding the conduct of Security Personnel are received, monitored, documented, and resolved through the Project's GRM
f	Emergency COVID-19 response to a containment strategy	• Potential for the exclusion of issues which are relevant to vulnerable groups such as children, people with disability in accessing health services, isolation and quarantine services • Possible discrimination against individuals of ethnic groups or religious groups • Rise in tensions inside the isolation and quarantine centers due to lack of basic facilities such as food, water and lodging, and infection prevention and control measures	• Ensure communication, messaging is inclusive and accessible to all including people with disabilities. • Provision of a sufficient supply of tests, medical supplies, food supplies, water, and sanitation facilities. • Ensure continued caregiver services for persons who are elderly, children, or persons with disabilities. • Ensure universal access to isolation and quarantine services • Ensure quarantine facilities are located with considerations for access to basic needs and facilities such as food and water. • Provide separate quarantine facilities for women and children where possible • Develop clear protocols to protect women and children against harassment/violence • Free testing and treatment for COVID-19 among vulnerable populations • Training and sensitization of health workers and others
		• Possible increase in incidents of violence/harassment due to stigmatization related to COVID-19 of health workers, patients	• Use inclusive language and less stigmatizing terminology in information and communication materials • Prioritize collection and dissemination of accurate information on affected, treatment options, access to health services

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
		• Social stigma against certain ethnic groups and religious groups.	• Engage social influencers such as religious leaders or local women leaders, women's groups
		Increased risk of exclusion for people located in remote areas and low capacity of health services.	• Targeted community engagement program • Mobilization of health workers and programs to provide
		• Discomfort concerning the rules that are imposed for COVID-19 and conflict with the spiritual and cultural practices • Social unrest due to disruption of cultural and communal activities due to distancing and other restrictions	• Culturally and socially appropriate messaging and awareness-raising should be carried out • Religious leaders and civil society/ community groups should be engaged early in the process to facilitate adherence and dispel rumors and misinformation • Strengthen Grievance Redress Mechanism and public information dissemination activities to prevent mismanagement and social unrest • Deploy security personnel to protect vaccination teams, and in line with ESS4 and UN principles on security and human rights.
		Increased risk of violence against women and girls (VAWG) and children due to mandatory confinement, restrictions	• Ensure GBV support services are included in COVID-19 response and ensure funding to GBV service providers • Community messaging and awareness-raising campaigns should embed messages on healthy conflict resolutions, stress and anger management. • Encourage informal and (virtual) social support networks and platforms • Ensure that public health emergency mitigation plans are a gender inclusive and accounting for the needs of vulnerable populations.
		Impact on residential care for people with disabilities, elderly due to social distancing policies, restricted mobility	• Consider reassignment of caregivers at home as needed to support in day-to-day activities

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
g	Community engagement and risk communication	• Possible risk of exclusion of indigenous and other vulnerable groups from access to information due to language barriers, cultural barriers, literacy, and remoteness. • Social unrest and mistrust due to misinformation and misunderstanding • Vaccine skepticism and misconceptions impacting uptake of vaccine	• Mapping of different social groups including vulnerable groups and barriers and challenges faced • Identify key media and other channels and influencers to reach the target groups/audience • Develop culturally and socially relevant messaging and awareness-raising for IPs, people with disabilities, poor urban communities, children • Information dissemination in local languages and in various formats through formal and informal channels • Involve local social mobilizers/ leaders/community influencers who can speak the local language and understand the cultural practices of the IPs and other vulnerable groups. • Consider providing information through trusted individuals/representatives and understand their concerns and language barriers • Deploy security personnel to protect vaccination teams, and in line with ESS4 and UN principles on security and human rights. • Identify IPs and vulnerable group networks and mobilize to reach the remote, marginalized, and vulnerable populations who cannot read and do not have access to phone or TV, radio • Ensure that community engagement teams are gender-balanced • Establish strong community and citizen engagement platforms taking into consideration the social networks available and operating within poor, disadvantaged, and vulnerable communities • Establish emergency support hotlines that is free and known to all, including to vulnerable groups and indigenous groups • Training modules developed taking into account gender and inclusive requirements

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
			• Regular and proactive communication and engagement with the public to alleviate confusion and avoid misunderstanding • Establish a regular feedback mechanism and capture common questions, misunderstandings through health hotlines, health care workers, and communities • Undertake communication campaigns particularly towards vulnerable groups to address potential misconceptions around of the vaccine in terms of benefits and risks, as outlined in the SEP • Consultations and vaccination campaigns will be conducted through partnership with relevant IP organizations and traditional authorities • Vaccination campaigns will clarify that the project will not undertake forced vaccinations. The program will have protocols in place to prohibit forced vaccination of any community.
h.	Life and Fire Safety risk management Storage and use of therapeutic oxygen in treatment of COVID-19	• Fire hazard	• Training and orientation of healthcare workers/facility users on L&FS, • Provision and use of appropriate PPEs, • Implementation of good international L&FS practices related to oxygen therapy and open fires near or around hospital and health care centers, emergency response, safe transport and storage of materials and waste management following of hygiene practices and protocols. • Functionality of fire safety measures including (i) appropriate access restrictions / controls; (ii) correct labelling; and (iv) scheduled routine inspection/maintenance program of equipment • Fire Safety documentation should be done which will detailed information on the systems installed in the building and it typically contains following information: as-built plans of the systems, data sheets of all components, list of necessary spare parts, supplier list, system certificates, fire safety design documentation

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
			• Compliance of hospitals/healthcare facilities building designs with earthquake proof specifications, fire escapes, and other fire prevention requirements, have standard smoke exhaust and detectors, drainage, etc. as required in line with the national Building Code and international standards e.g., the US NFPA (National Fire Protection Association) code. • Plan of Action in hospitals to deal with fire emergencies, including evacuation protocols, operation of medical gas, oxygen, and vacuum system zone valves, and incident reporting root cause analysis and corrective actions and audit. • Awareness raising campaign, establishing signs in facilities, on L&FS and on oxygen safety issues and mitigation for all staff, patients, and visitors • Fire prevention and training program for staff responsibilities to prevent a fire. • Periodic evacuation drills • Operationalization of a well-defined protocol for emergency supplies for patient during evacuation or relocation, especially for the elderly and fragile patients, and/or patients connected to life support equipment. • Emergency preparedness and response plan
C.	**Decommissioning stage**		
	Decommissioning of temporary care facilities in response to the surge of COVID-19 testing and treatment.	• Construction-related solid wastes, wastewater, noise, dust & emission, and hazardous materials waste. • OHS-related issues • Community health and safety issues including pollution and road safety • Temporary stockpiling of demolished materials	• Suitability and capacity of off-site disposal facilities, where demolished wastes will be transported and disposed of off-site. The adequacy and compliance with transport and disposal regulations and licensing for the transport vehicles and the offsite disposal facilities should be assessed. • Appropriate mitigation measures shall be developed preparing site-specific ESMPs following ESS1, ESS2, ESS3, ESS4 and ESS10

	Subproject/Activity	E&S Risk or Impact	Mitigation Measures
			• Reference shall be made to WHO medical device technical series "Decommissioning Medical Devices"[20] • WHO Rapid guidance on the decommissioning of Ebola care facilities

[20] http://nhrc.gov.np/wp-content/uploads/2017/02/National-Health-Care-Waste-Management-Guidelines.pdf

6. Procedures to Address Environmental and Social Issues

This section sets out the procedures for assessing and managing the environmental and social risks and impacts in planned project activities. When environmental and social consequences of implementation of a project are not well thought through, pertinent risks can materialize with knock-on effect on the project schedule, budget, and the project development object. In accordance with the risks mitigation hierarchy, the Health Emergency Operation Center (HEOC) will consider the imperative to avoid risks in the first instance, and/or minimize and mitigate adverse project impacts. The environmental and social procedures outlined below determines the appropriate instrument for assessing the risks and ensure effective integration of the environment and social aspects into subprojects to strengthen social and environmental risk management.

6.1 Environmental and Social Screening

Every sub-project to be funded under the project will be subject to an environmental and social screening process and before it is selected for support under the project. The process of screening of environmental and social risks and impacts begins at the sub-project planning stage to allow early identification of potential impacts and mitigation measures. The screening process will:

- Screen the eligibility of the activities
- Identify potential environmental and social risks and impacts of the proposed sub-project activity
- Determine the sub-project category (Category I, II and III); and
- Determine the level of environment and social assessment and management required to address the potential risks and impacts.

Each of the activities will be screened with respect to Nepal's Environmental Protection Act, 2019; the Environmental Protection Rules, 2020 as well as the World Bank ESSs. An environmental and social screening form has been developed (see Annex II) and will be used for risks screening.

6.1.1 Categorization of subprojects and environmental and social assessment

Activity categorization as part of the screening process is essential for an early understanding of the type, nature, and scale of impacts. Based on the sensitivity of the environmental and social risks and impacts, subprojects fall into one of the following risk categories. The screening will also determine the extent of assessment and management plans to be developed:

- **Category I:** Activities which will not eligible for support through the Project. The criteria for determining this category of projects are predetermined as per the exclusion criteria set out in the project ESCP and section 2.2 of this ESMF.
- **Category II:** Activities which will have adverse environmental and/or social impacts that are limited to the site of the proposed activity and its immediate surrounding and can be addressed through mitigation measures that are readily known and available. The category II activities include minor rehabilitation of ICU beds and associated facilities (financed through the parent project) and may require the preparation of an Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA) as per the country environmental protection rules, and

corresponding ESMP. Category II sub-projects may have impacts on Indigenous Peoples and/or vulnerable groups. Support measures to address the issues related to IPs and vulnerable groups will be integrated into the ESMPs and SEPs. Each healthcare facility will prepare and ICWMP (See Annex IV for the templates on ICWMP and Annex III ESMP). The management plans will be submitted to the World Bank for review and clearance. Environmental and social risks as well as the level of assessments required will be agreed with the World Bank.

- **Category III:** Activities which are likely to have minimal or no adverse environmental and social impacts and will not require assessment beyond screening. The screening report will recommend mitigation measures for minor issues or impacts identified by the screening exercise. In some situations, an abbreviated and site-specific ESMP may be needed. The World Bank will review management plans on a sample basis and/or on case by case based on the perceived risks.

6.2 Preparation of Management Plans

Where required, HEOC will ensure that eligible sub-projects/activities prepare the necessary environmental and social instruments (such as an ESMP and ICWMP) that will describe and prioritize mitigation measures, corrective actions and monitoring measures necessary to manage the impacts and risks identified in the screening assessments, IEEs or EIAs. Where risks and impacts cannot be avoided or prevented, mitigation measures and actions will be identified so that the activities operate in compliance with applicable national laws and regulations, and with requirements of relevant World Bank ESSs. Measures and actions that address identified impacts and risks will favor the avoidance and prevention of impacts over minimization, mitigation wherever technically and financially feasible. The template for ESMPs is provided in Annex III and the templates on ICWMP in Annex IV. HEOC will ensure that all works contracts will include the ESMPs and ICWMP, and the cost of implementing the ESMPs will be identified as an item in the Bill of Quantities for the respective contracts of physical interventions for implementing the ESMP.

6.3 General principles for engaging IPs in the vaccination program

The tendency to marginalize indigenous and vulnerable people out of vaccination and other project activiteis is recognized as a potential risks. Vaccine delivery could confront local cultural and medicinal practices of IP groups. Similarly, any localized outbreak of COVID among IPs, the necessity for patient isolation and quarantine, social distancing, and prohibition of transmission amplifying events (e.g. funerals, and cultural events) could pose material effects on the cultural, ceremonial, or spiritual aspects of indigenous groups. The NVDP (2021) sets out the national framework to ensure that all eligible persons can voluntarily participate in the vaccine program. Specific to IPs, the MoHP will be guided by the following principles;

a. There shall be No forced and/or mandatory vaccination[21] [22]
b. Consultation with IP groups will be conducted with due regard and respect for the cultural and traditional leadership structure and customary practices of such groups
c. Disclosure and communication activities will be conducted in local languages
d. Explore and collaborate with IP organizations and key representatives at federal, provincial and local levels
e. All consultation activities with IPs, and indeed all other groups, will be conducted with due regard for social distancing and making sure that such activities do not set the groups for COVID-19 transmissions.
f. Section 2 of this ESMF and the ESCP set out an exclusion criteria for activities that present adverse impacts on land and natural resources customarily owned and used by IP groups and/or activities that may result in displacement and relocation of such groups.

6.4 Process for Managing Environmental and Social Impacts

This ESMF proposes measures to minimize and mitigate adverse environmental and social impacts of project activities. Proper integration of findings from studies and public consultations into the planning and decision-making process and engineering outputs (design and bidding documents) will be essential to avoid/reduce the environmental and social issues that may arise due to the project. To ensure the CERHSP does not cause any significant adverse impacts, a screening process will be established and made mandatory for each subproject. In case significant projects are likely to occur, the CERHSP will require an environmental and social assessment and preparation of mitigation/management plans. The key steps for managing any potential adverse impacts are outlined in for civil works carried out under the project.

Table 6-1: Key Steps for Managing Environmental and Social Issues

Stages in Sub-Project Cycle	**Steps in Assessment Process**	**Responsibility**
Sub-Project Identification	Environmental and social screening to determine key risks and impacts Field verification as feasible	MoHP
Project Design (for works that do not require assessment	Consultation with key stakeholders Preparation of ESMP	MoHP

[21] *Forced vaccination* refers to a government mandate requiring vaccination of everyone or everyone in a defined group, without any exceptions or due process for refusing to be vaccinated. Refusal to be vaccinated may result in punitive measures such as criminal sanctions.

[22] *Mandatory vaccination* refers to reasonable government regulations, which aim to promote public health and safety, on vaccinating everyone or everyone in a defined group, with provisions for medical or religious exceptions, and appropriate due process systems and grievance mechanisms for refusing to be vaccinated. Mandatory vaccination regulations may include restrictive measures conditioning access to certain public benefits to vaccination (such as public transport or schools). Regulations that include punitive measures for refusing to be vaccinated, such as criminal sanctions, will be considered forced vaccination mandates.

and only require ESMP)	Ensure integration of ESMP into bidding documents	
Project Design (for minor rehabilitation of ICU facilities that require IEE; since works requiring EIA will be excluded, EIA details are not mentioned here)	Prepare ToR to carry out IEE to determine level and scope of assessment. ToR for IEE should be approved by relevant Ministry. Preparation of IEE includes the steps below: 1. Baseline data collection: Identification of environmental and socio-economic conditions 2. Environmental and Social Impact Prediction Assessment: Assessment of impacts in terms of characteristics such as magnitude, extent, duration and significance in quantitative terms as far as possible; describe all reasonable alternatives, including preferred and 'no project' options. 3. Mitigation Measures Design: Design to avoid, reduce and minimize adverse environmental and social impacts and enhance beneficial impacts 4. Public Consultation and Participation: At various stages in the assessment process to ensure quality, comprehensiveness and effectiveness of the stakeholders' participation and to adequately reflect/address their concerns. 5. Preparation of Environmental and Social Management Plan (ESMP): Determination of specific actions to taken during engineering design and construction stages to minimize or mitigate negative impacts and enhance the positive impacts. 6. Report preparation: Summary of all information obtained, analyzed and interpreted in a report form; also include non-technical summary including methods used, results, interpretations, and conclusions made. IEE should incorporate physical, chemical, biological, social, economic, and cultural, aspects/environment and alternative designs/studies to reduce the impacts.	MoHP
Sub-project approval	Review and approval of reports: Review of report/s to assess if all possible issues have been adequately addressed to facilitate the decision-making process; decide if project should proceed, or if further alternatives must be examined or totally abandoned. Integrate IEE or ESMP into bidding documents if works are to be carried out by contractors.	MoHP
Implementation	1. Orient / train the Contractor and other field staff on ESMP requirements. 2. Supervise, monitor and regularly report on ESMP and IEE compliance 3. Take corrective actions, if and when as needed	MoHP
Post-Construction	Post-construction maintenance and operation in line with ESMP	MoHP

6.5 Environmental and Social Screening during CERC Implementation

Component 4 of the project is a Contingent Emergency Response Component (CERC). The project ESMF will be updated upon activation of the CERC. In addition, a CERC operations Manuel will be prepared during project implementation to govern the operation of the component, in line with the ESMF, and will include provisions to ensure environmental and social due diligence in line with the requirements of the ESSs.

7. Stakeholder Engagement, Public Consultation and Disclosure

Stakeholder engagement throughout the project life cycle is critical to the success of the project. In the context of infectious diseases, broad, culturally appropriate, and adapted awareness-raising activities are particularly important to sensitize the communities about the risks related to the infectious disease.

A SEP has been prepared for the project to guide stakeholder consultations throughout the project lifecycle in compliance with ESS10 and it applies to all project financed activities throughout the project cycle. The overall objective of the SEP is to define a program for stakeholder engagement, including public information disclosure and consultation, throughout the entire project cycle. Specific and targeted approaches will be adopted to ensure that the vulnerable and marginalized groups including women, indigenous people, Dalits, and people with disabilities, have meaningful participation in the decision making and implementation of the activities. The project will implement and continuously update the SEP as the project evolves to account for the emerging needs of stakeholders.

During implementation, the project will review the COVID-19 risk level in the project area and the restrictions implemented by the GoN to contain transmission and will establish a plan for continued consultation and stakeholder engagement. Appropriate adjustments will be made in the approach, methods, and forms of engagement to consider the need to prevent the spread of the disease. As described in the SEP, MoHP will publicly disclose this ESMF and all the environmental and social assessments and plans at appropriate locations including the MoHP website (both in English and Nepali).

Given the emergency nature of this operation and the transmission dynamics of COVID-19, consultations have been limited to telephone and virtual consultation with relevant government officials, representatives from vulnerable groups, health experts, and hospital administrators. Consultations on the draft SEP and draft ESMF were virtually carried out on 26 June 2020 and telephone interviews with key stakeholders in July 2020. A summary of issues raised during consultation is detailed in the SEP. This ESMF and the updated SEP address concerns raised during consultations held in June and July 2020.

As noted above, a significant risk in the AF relates to the potential for vaccine skepticism and misconceptions about the benefits and risks of the COVID-19 vaccine. There is also the risk that information needs of indigenous groups could be missed if not carefully assessed and incorporated in mainstream information dissemination by MoHP. In the context of infectious diseases, broad, culturally appropriate, and adapted awareness raising activities are important to sensitize the communities about the risks related to infectious diseases. To effectively deliver the vaccination activities under the AF, meaningful stakeholder engagement is key and will facilitate information disclosure concerning the principles of vaccine prioritization, the schedule for vaccine rollout, and the vaccine delivery mechanisms. In particular, there is the need to reach out to disadvantaged and vulnerable groups in order to overcome demand-side barriers to access facing these groups, such as mistrust of vaccines, and to help generate vaccine acceptance by reversing rumors and addressing fears. Effective engagement may also help to generate transparency and create accountability against misallocation, discrimination and corruption.

Given the scope of activities for this AF, the stakeholder engagement activities prioritize awareness raising amongst all stakeholders including the local population (especially the frontline health and social workers, those above 60 years of age, and those with comorbidity conditions). Activities will

include awareness raising amongst disadvantaged or vulnerable individuals or groups which are culturally appropriate and adapted, considering the social and cultural sensitivities of these groups, possible risk perceptions and vaccine skepticism, and any past negative vaccination experiences, in order to generate vaccine acceptability and their voluntary participation in vaccination activities.

7.1 Existing Stakeholder Engagement Process

The project will build on the existing stakeholder engagement process established by the MoHP to combat the spread of COVID-19. The Public Information Coordination Unit under the Health Coordination Division, which is led by a joint secretary and the spokesperson of the ministry, is responsible for the dissemination of health-related information. The unit has taken the following initiatives:

- Daily press briefings on the COVID-19 situation which is aired live on local TV channels and radio and other social media
- A dedicated website[23] for disseminating up-to-date information related to COVID-19, including the number of infected individuals and fatalities, guidelines issued by the governments, IEC materials, Q&A related to the pandemic, health massages related to COVID-19 and other communicable diseases, a list of designated hospitals for COVID-19 testing and treatment, important links and daily status report.
- A four-digit round-the-clock telephone hotline, an online messaging app (Viber), and dedicated mobile numbers to get information related to the diseases for the public. The telephone hotlines are also used for grievance redress.
- Weekly Health Cluster meetings organized and chaired by MoHP and co-chaired by WHO to communicate with relevant agencies including partners, INGOs, NGOs on status progress, identification of gaps, and resolution of issues.

As part of the updated SEP, consultation and engagement activities will deploy key messages on priority populations (inclusion and exclusion criteria), vaccination centers and procedures, and other COVID-19 related information.

7.2 Strategic engagement with the Vulnerable Groups

Vulnerable groups particularly women, indigenous peoples are likely to be disproportionately affected by COVID-19. They may have further limitations in accessing information, accessing medical services, participating in project consultations, and articulate their concerns and priorities. There could be several barriers, such as poverty and illiteracy, language, cultural practices, unfamiliarity, and lack of access to modern means of communication, and low social status, among others. Specific measures and assistance will be required for engagement with the vulnerable groups to ensure their participation in the project related decision making. Vulnerable groups within the communities affected by the project will be further confirmed and consulted as outlined in the SEP. Given the risks related to limitations in accessing information, vulnerable groups are also at risk of receiving misinformation around the vaccine program leading to vaccine skepticism and misconceptions. The SEP outlines specific measures to communicate

[23] See https://covid19.mohp.gov.np/#/

and engage with indigenous groups and vulnerable groups to address misconceptions and minimize these risks.

7.3 Stakeholder Engagement Strategy during COVID-19 crisis

The SEP for the project, guided by the WHO Risks Communication and Community Engagement (RCCE) Protocol, the World Bank's ESS10, the World Bank's Technical note on Public Consultations, and the GoN's National Health Communication Policy 2012 has been updated, consulted upon and was disclosed on February 5, 2021. As noted in the ESCP, the SEP may be reviewed and further updated to reflect comments from stakeholders ahead of vaccine rollout. Specific and targeted approaches have been outlined in the SEP to ensure that the vulnerable and marginalized groups are fully consulted and thoroughly informed about the activities especially on access to vaccines. As noted in the SEP, all engagement activities will be conducted with consideration for social distancing and other COVID-19 prevention protocols.

Across the engagement activities, the project will adopt the following:

- Review the infectious disease situation in the project area and the restrictions implemented by the GoN to contain the spread of the virus
- Review the existing approach and methodology for engagement activities and make appropriate adjustments to consider the need to prevent the spread of infectious diseases.
- Identify vulnerable or disadvantaged individuals such as women, indigenous peoples, and people with disabilities, and the limitations they may have in participating and/or in understanding the project information or participating in the consultation process amidst the restrictions (for example, language differences, cultural barriers, lack of safe transportation to events, accessibility of venues, disability, lack of understanding of a consultation process)
- Where direct engagement with project-affected people or beneficiaries is necessary, and cannot be postponed, identify channels for direct communication with each affected household via a context-specific combination of online platforms (wherever feasible only) or dedicated phone lines.
- If physical meetings are not permitted, diversify the channels of communication, and consider which communication channels are applicable in the local context. Rely on local engagement partners to understand which channels are used by local community members in this non-normal situation to determine which mechanisms can be used to reach the right audience. List out both ICT-based mechanisms and non-ICT approaches that suit local conditions.
- Ensure that all the PCO members and project associated staff understand a new set of social behavior and good hygiene practices as prescribed by COVID-19 guidelines and that all consultations are preceded with procedures articulating good hygiene practices
- Avoid all gatherings that include direct interactions between project officials and beneficiaries/affected people. However, depending upon the GoN's permissions, smaller meetings, such as focus group discussions can be organized by taking all precautionary measures prescribed by the government and WHO guidelines.

7.4 Grievance Redressal Mechanism (GRM)

With the outbreak of the COVID-19, the two hotlines established by the Ministry of Health and Population (MoHP) have been the most effective means to respond to the queries, complaints and, concerns of the general public by providing appropriate information and counseling them on their problems. Epidemiology and Disease Control Division (EDCD) had set up a COVID-19 Call Centre with a dedicated toll-free hotline number 1115 since 13th March 2020 with 11 agents servicing the center from 6 am to 10 pm each day with information/guidance on prevention and treatment of COVID-19 and an availability of 24hrs Interactive Voice Response (IVR) service. Due to the increasing number of cases, another extension call center (1133) was established in Kalash with 23 additional agents from May 2021 to make follow up calls to the home isolation cases of Kathmandu Valley and case management of Kathmandu district and other districts. These two designated COVID-19 call centers (1133 and 1115), have effectively responded to more than 475,000 callers as of 20th August 2021 and 111,000 follow up calls as of 22nd September 2021. These call centers are the primary GRM mechanism established under the project, including referral of cases of sexual abuse and exploitation or sexual harassment for appropriate resolution. The project aims to strengthen the telephone hotline system which will also be used to establish a grievance mechanism for recording, addressing, and reporting grievances. An assessment of the call centers was completed in October 2021 and identified several areas that could be addressed for strengthened operations. These include logistics upgradation of the centers for an enabling environment for improved productivity; training and mentoring of call center staff; streamlined availability of recent, updated information to share with callers and improved data recording and analysis for quality functioning.

The functioning of the GRM is well publicized via different communication channels including mass media--radio and TV and social media and print media. The project will offer the grievance redressal services at no cost to communities and without retribution, and grievance mechanisms is not expected to impede access to judicial and administrative remedies. The SEP outlines in detail the GRM in place, including the structure of the GRM, intake channels for grievance, procedure for resolution, and the appeal process. The GRM will also address project-related concerns or questions including around vaccine activities.

7.4.1 Handling GBV-related grievances

The existing GRM will also be used for addressing project related GBV issues. GBV cases will be referred to the National Commission for Women and the One Stop Crisis Management Center. The project will support development and implementation of procedures for handling the GBV-related issues that will be put in place for confidential reporting with safe and secure documentation of GBV issues. Grievances related to highly sensitive cases or as per the wise of the complainant will be filed anonymously, which is essential for capturing any grievances that may arise concerning GBV (gender-based violence) and SEA/SH (sexual exploitation and abuse and sexual harassment). Further, the GRM will contain a robust mechanism to immediately notify both the MoHP and the World Bank of any GBV complaints, with the consent of the survivor.

7.5 Specific measures to address risks and concerns related to vaccination program

As the project implementation progresses, the MoHP will draw on the concerns and feedback received through the grievance mechanism and other channels to review and disseminate information that is responsive to frequently asked questions and issues of interest raised by the public and institutional stakeholders. As misinformation can spread quickly, especially on social media, the Social and Communication Specialists at MoHP will scan select social media regularly, check for potential misinformation in relation to vaccine deployment and side effects, and take steps to provide official and accurate information. Key media and other channels and influencers will be identified and monitored. In response, the MoHP will disseminate targeted messages and talking points to counter such misinformation through different platforms in a timely manner. These will also be in relevant local languages, in addition to Nepali. IPs and vulnerable groups, influencers will be mobilized to reach the marginalized, and vulnerable groups particularly those who cannot read and do not have access to phone or TV, radio and other technologies. Hotlines and other feedback mechanisms will be strengthened to capture common questions and misunderstandings. The MoHP will also ensure that any concerns or grievances regarding the conduct of police or military personnel deployed for the provision of security of vaccination storage and transport, and health workers, are received, monitored, documented (taking into account the need to protect confidentiality), and are resolved through the GRM, and are reported to the MoHP and the World Bank.

8. Institutional Arrangements, Responsibilities and Capacity Building

This section describes the institutional arrangements to implement this ESMF including the screening of subprojects for environmental and social risks and impacts, preparation and consultation in relation to the assessment and identification of mitigation measures for subprojects, review, clearance and disclosure of documentation and instruments, and monitoring the implementation of the ESMP and the SEP. The roles outlined are determined along with regular roles and responsibilities of the various units (and sometimes individuals) of the Department of Health Services (DoHS) of Nepal and based on the project's ESCP.

The MoHP is the lead agency responsible for overall project implementation including the AF, and which includes a number of departments and divisions, namely, the Department of Health Services (DoHS), Policy, Planning and Monitoring Division, Health Coordination Division (HCD), Epidemiology and Disease Control Division, Management Division (MD), National Public Health Laboratory and the Health Emergency and Operation Centre (HEOC). A project specific unit will not be established.

8.1 Management of environmental and social risks

The HEOC will be responsible for managing the environmental and social impacts of project activities in coordination with the following units of DoHS, namely the MD, Curative Services Division (CSD), National Health Education, Information and Communication Centre (NHEICC) and the Nursing Division (ND). The MD and CSD provides oversight for environmental impacts including medical waste management, ensures control and compliance with national infection control and waste management standards, and ensure contractors and service providers adhere to OHS procedures; whilst the HEOC working with NHEICC and ND will coordinate social impact management, RCCE activities, and respond to grievances and complaints. The process of hiring two dedicated environmental and social specialists (one environment and one social) to augment capacity at the HEOC is in progress. It is expected, as per the ESCP, that the specialists will be onboarded within two months of the project becoming effective.

In February 2020, the MoHP developed and adopted a National Health Care Waste Management Standards and Operating Procedures, 2020, with technical support from GIZ, which also includes methods for disposing vaccine waste. That standards are part of the suite of protocols or managing health care waste in the project and will be extended to waste that may be generated from the proposed vaccine program. The MoHP has also developed a Gender Equality and Social Inclusion (GESI) section/unit to address GESI issues and to promote and facilitate the inclusion of women, Dalit, Indigenous Peoples, persons with disabilities, and other excluded communities in the formulation and implementation of health policies.

HEOC will coordinate and maintain overall oversight of activities related to the management of environmental and social risks and impacts envisaged by the ESMF throughout the project lifecycle. In particular, the HEOC in coordination with the above mentioned units will be responsible for the implementation of the Environmental and Social Commitment Plan (ESCP), ESMF, IHCWMP, and SEP of the project, and will be responsible for due diligence, screening of activities, and monitoring.

The Environmental Specialist and Social Specialist will play a lead role in ensuring the following environmental and social-related tasks are effectively carried out, including the below:

- Undertaking environmental and social screening for subprojects
- Ensuring activities outlined in the ESCP are carried out
- Supporting the preparation and implementation of environmental and social instruments, such as ESMPs, resettlement actions plans, health care facility specific HCWMPs, throughout the project lifecycle
- Preparing Terms of Reference (ToR) for undertaking IEEs where required
- Supporting the process of requesting clearances from relevant national authorities where applicable
- Monitoring and reporting on compliance of due diligence mechanisms
- Preparing quarterly compliance summaries and formally communicating to the World Bank on environmental and social-related issues and matters, including evidence of compliance with ESMPs covering the applicable ESS requirements (e.g. ESS2 – OHS, GRM, Incidents, ESS3 – Waste Management / Disposal and Air / GHG Emission control, ESS4 – Security Forces / Incidents, ESS10 – SEP / Inclusion and GRM.
- Supporting the facilitation of stakeholder engagement activities as outlined in the SEP, including citizen engagement activities. The stakeholder engagement should focus on awareness raising about L&FS risk management in general and on oxygen safety issues and mitigation and should be targeted to staff of the health care facilities
- Ensuring that OHS and labour management actions and measures are incorporated into bidding documents and contractor requirements
- Ensure that L&FS risk management procedures is in place, training for staff, maintenance plans for active (e.g. water suppression systems, smoke management systems, fire detection and alarm systems) and passive fire safety systems (e.g. fire barriers and walls, fire doors).
- Emergency preparedness and response planning and drills.
- Ensuring the adequate consideration and inclusion of GESI related aspects in project activities
- Designing and delivering relevant capacity building and training to effectively implement the ESMF
- Ensuring the efficient functioning of grievance mechanism
- Coordinating and liaising with relevant stakeholders including GoN agencies, MoHP staff, contractors and engineering supervisors
- Managing other unanticipated project-related environmental and social risks and issues which occur

The staffing of the environment and social specialists and other staff will be based on the level of effort required to manage environmental and social risks and impacts of the project. HEOC will regularly review

risks, workload and requirements and if needed, staffing structure will be enhanced to commensurate with the implementation risks and requirements.

HEOC will also be responsible for preparing individual ESMPs where required, as well as ensuring compliance with the ESMPs, and for preparing IHCWM plans. Contractors and supervising consultants will also be responsible for implementing mitigation measures outlined in the ESMPs.

HEOC will be responsible for reporting of all project activities to the World Bank.

Regular World Bank missions will include specialists to monitor the project's compliance with World Bank ESSs. The World Bank's environmental and social specialists will provide close supervision and necessary implementation support and will review the environmental and social instruments including screening reports and ESMPs prepared by the project.

Table 8-4 Roles and Responsibilities of MoHP, Hospitals

S. N	Actions	Responsible Agency
1	Prepare and implement the ESMF and submit for the Bank approval Disclose the ESMF and SEP on the MoHP website and seeks comments and feedback. Address appropriate feedback and manage to incorporate appropriate comments Compliance Monitoring of ESMF and SEP	MoHP
2	Screening of activities	MoHP and relevant divisions and project-financed facilities
3	Screening of rehabilitation/construction works Preparation of ESMPs/LMP if rehabilitation/construction of civil works are included and implementation Preparation and implementation of IHCWMP	MohP MoHP
4	Regular monitoring of other activities	MoHP
5	Regular Monitoring of civil works	MoHP

8.2 Existing environmental and social capacity of MoHP

The MoHP has limited experience and familiarity with the World Bank's environmental and social policies, having implemented only low-risk Performance for Results (PforR) operations (e.g. Nepal Health Sector Management Reform Program) with the World Bank. The MoHP has only limited knowledge of the World Bank's new Environmental and Social Framework (ESF) which became effective in October 2018.

The MoHP faces inadequate institutional capacity and budget constraints, and there are no internal procedures for discharging the environmental and social mandates noted above effectively. The Bank and other development partners are responding to these challenges. The German Development Agency (GIZ) is currently providing support, including training and equipment for staff, to help strengthen health care

waste management system in 13 hub hospitals. UNICEF provides technical assistance to the MoHP in the areas of RECCE and to enable the MoHP to undertake twice-a-week press briefings, radio/TV/social media programs, and a public health communication campaign. The Bank also provides hands-on support in ensuring compliance with environment and social safeguards policies.

8.2.1 Capacity building of MoHP for ESMF Implementation

The World Bank will work with the MoHP and other Development Partners to develop and implement a proportionate capacity building plan, as well as train and provide technical support for project staff towards effective implementation of the ESCP, ESMF, SEP, and other management plans. The capacity building program, which will be developed in coordination with various departments and divisions of the MoHP, will be financed by Component 3: Implementation, Management, Monitoring, and Evaluation. It is expected that the capacity enhancement program will contribute to increased environmental and social awareness among the project's team and will support the implementation of project activities in compliance with the ESS and other requirements.

Under the program, staff associated with HEOC, including the environmental and social specialists and consultants, will be provided with trainings on environmental and social risk management including implementation of the ESMF and the World Bank's ESF. The training activities, which will be led and facilitated by Environmental and Social specialists of the World Bank, will also focus on monitoring and reporting requirements of the MoHP, management of the GRM, and conducting stakeholder consultations. In addition, contractors associated with the project including their workforce will trained on ESMF compliance and basic OHS considerations as required. A proposed capacity building training plan is outlined at Table 8-5.

Table 8-5 Capacity building training plan

Training program	Targeted Audience	Conducted by	No. of training program over the period
ESF E-Learning Program- Online Modules	MoHP including HEOC staff	Online Modules	One training following the commencement of the project
ESMF and ESF Implementation training that mainly focuses on WB's E&S management procedures, consultation and GRM, monitoring and reporting	MoHP including HEOC staff	WB's E&S Specialists and team	Two training programs during the project lifecycle
Training on implementation of ESMF and ESF Implementation - Based on the subproject specific ESMPs, if applicable.	Sub-project staff including Contractor and consultants' team	E&S Specialists and team	At minimum once, prior to the contract commencing on the ground for each subproject in implementation.
Training on Occupational Health and Safety considerations, use of PPE	To contractor staff including supervision	E&S Specialists and team	Every 3 months during the contracted project implementation period-

equipment and worker codes of conduct, if applicable.	consultant's team during the project implementation		specifically targeting the construction phase.
Awareness raising/ training for staff in L&FS risk management procedures, maintenance plans for active (e.g. water suppression systems, smoke management systems, fire detection and alarm systems) and passive fire safety systems (e.g. fire barriers and walls, fire doors), establishing safety signs related to fire safety management. Emergency preparedness and response planning and drills.	Main target group operators of oxygen generation plants and hospital staff, The awareness raising activities (safety signs, brochures, etc.) should cover guidance on emergency and precautionary measures for L&FS for patients, contractors and visitors	Skilled FS personnel,	Every 6 months
COVID -19 Specific Training Covering Topics Such as • COVID-19 Infection Prevention and Control Recommendations • Laboratory biosafety guidance related to the COVID-19 • Specimen collection and shipment • Standard precautions for COVID-19 patients • Risk communication and community engagement • WHO guidelines on quarantine including case management • National Health Care Waste Management, standards and operating procedures (October 2020) • Infectious waste management procedures and HCWM within COVID-19 care facilities.	MoHP including HEOC staff, and other relevant staffs.	External resource persons such as the WHO	Every year during project implementation.

9. Annexes

I. Abbreviations and Acronyms
II. Screening Form for Potential Environmental and Social Issues
III. Environmental and Social Management Plan (ESMP) Template
IV. Infection Control and Waste Management Plan (ICWMP) Template
V. Resource List: COVID-19 Guidance

I. Abbreviations and Acronyms

AFB	Acid-Fast Bacilli
AMR	Antimicrobial Resistance
BMBL	Biosafety in Micro Biological and Biomedical Laboratories
BMW	Bio Medical Waste Management
BSC	Biological Safety Cabinets
BSL	Biosafety Level
CDC	Centre for Disease Control and Prevention
COVID-19	Coronavirus Disease 2019
EOC	Emergency Operating Centre
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESHS	Environmental, Social, Health and Safety
EHS	Environmental, Health and Safety
ERP	Emergency Response Plan
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GBV	Gender Based Violence
HCF	Healthcare Facility
HCW	Healthcare Waste
HEOC	Health Emergency and Operation Centre
HEPA	High Efficiency Particulate Air filter
HIV	Human Immunodeficiency Virus
HWMS	Healthcare Waste Management System
HVAC	Heating, Ventilation and Air Conditioning
ICWMP	Infection Control and Waste Management Plan
IPC	Infection and Prevention Control
OHS	Occupational Health and Safety
POE	Point of Entry
PPE	Personal Protective Equipment
PPSD	Project Procurement Strategy for Development
RPF	Resettlement Policy Framework
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SOP	Standard Operating Procedures
TA	Technical Assistance
TB	Tuberculosis
UNOPS	United Nations Office for Project Services
WB	World Bank
WHO	World Health Organization
WWTP	Wastewater Treatment Plant

II. Screening Form for Potential Environmental and Social Issues

This form is to be used by the Project Implementation Unit (PIU) to screen for the potential environmental and social risks and impacts of a proposed subproject. It will help the PIU in identifying the relevant Environmental and Social Standards (ESS), establishing an appropriate E&S risk rating for these subprojects and specifying the type of environmental and social assessment required, including specific instruments/plans. Use of this form will allow the PIU to form an initial view of the potential risks and impacts of a subproject***. It is not a substitute for project-specific E&S assessments or specific mitigation plans.***

A note on *Considerations and Tools for E&S Screening and Risk Rating* is included in this Annex to assist the process.

Subproject Name	
Subproject Location	
Subproject Proponent	
Estimated Investment	
Start/Completion Date	

Questions	**Answer**		**ESS relevance**	**Due diligence / Actions**
	Yes	no		
Does the subproject involve civil works including new construction, expansion, upgrading or rehabilitation of healthcare facilities, vaccine cold storage units and/or waste management facilities?			ESS1	ESIA/ESMP, SEP
Does the subproject involve land acquisition and/or restrictions on land use?			ESS5	RAP/ARAP, SEP
Does the subproject involve of the use of private assets for quarantine, isolation or medical treatment purposes?			ESS5	
Is the subproject associated with any external waste management facilities such as a sanitary landfill, incinerator, or wastewater treatment plant for healthcare waste disposal?			ESS3	ICWMP/ESMP, SEP

Is there a sound regulatory framework and institutional capacity in place for healthcare facility infection control and healthcare waste management?			ESS1	ESIA/ESMP, SEP
Does the subproject have an adequate system in place (capacity, processes and management) to address waste?			ESS4	ICWMP
Does the subproject involve recruitment of workers including direct, contracted, primary supply, and/or community workers?			ESS2	ESMP, SEP, Workers' GRM
Does the subproject have appropriate OHS procedures in place, and an adequate supply of PPE (where necessary)?			ESS2	OHSP/ESMP
Does the subproject have a GRM in place, to which all workers have access, designed to respond quickly and effectively?			ESS2, ESS10	GRM
Does the 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	ESIA/ESMP, SEP
Does the subproject involve use of security or military personnel during construction and/or operation of healthcare facilities and related activities?			ESS4	Security Risk Assessment/Security Management Plan, SEP
Are there any indigenous groups (meeting specified ESS7 criteria) present in the subproject area and are they likely to be affected by the proposed subproject negatively or positively?			ESS7	SEP

Does the project area present considerable Gender-Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) risk?			ESS1	ESMP, SEP/SEA/SH protocol, Training and Orientation
Does the subproject carry risk that disadvantaged and vulnerable groups may have unequitable access to project benefits?			ESS1	ESIA/ESMP, SEP

Conclusions:

1. **Proposed Environmental and Social Risk Ratings (High, Substantial, Moderate or Low). Provide Justifications.**

2. **Proposed E&S Management Plans/ Instruments.**

INFECTION CONTROL: CONSIDERATIONS AND TOOLS TO ASSIST IN E&S SCREENING AND RISK RATING:

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.

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 of health care facilities, vaccine cold storage units, healthcare waste and wastewater facilities
- training of medical workers and volunteers
- community engagement and communication

1. Screening E&S Risks of Medical laboratories

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. OHS of workers in the laboratory and potential community exposure to the virus should be considered.

The following documents provide further guidance on screening of the E&S 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 E&S Risks of Quarantine and Isolation Centers

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.

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.

In screening for E&S 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
- provision of accurate information to ill, infected or exposed persons in a simple, accessible and culturally appropriate manner

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 E&S RISKS OF TREATMENT CENTERS AND FOR DEPLOYMENT OF VACCINES**

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 E&S RISKS RELATING TO LABOR AND WORKING CONDITIONS**

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. 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.

Environmental and Social Management Plan (ESMP) Template

Introduction

The Borrower will need 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 E&S mitigation measures. The Borrower can use the matrices to assist in identifying risks and possible mitigations.

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 Borrower may incorporate relevant sections of the ESMF into the ESMP, with necessary updates.

The matrices illustrate the importance of considering lifecycle management of E&S risks, including during the different phases of the project identified in the ESMF: planning and design, construction, operations and decommissioning.

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 Borrower should review and add to them during the environmental and social assessment of a subproject.

The WBG EHS Guidelines, WHO technical guidance documents and other GIIPs set out in detail many mitigation measures and good practices, and can be used by the Borrower 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.

The Infection Control and Waste Management Plan forms part of the ESMP. The ESMP should identify other specific E&S management tools/instruments, such as the Stakeholder Engagement Plan (SEP), labor management procedures (LMP), and/or Medical Waste Management Plan.

Table 1 - Environmental and Social Risks and Mitigation Measures during Planning and Designing Stage

ey Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
Identify the type, location and scale of healthcare facilities (HCF) or facilities to be used for deployment of vaccines					
Identify onsite and offsite waste management facilities, and waste transportation routes and service providers	Inadequate facilities and processes for treatment of waste	➢ 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, and expansion. ➢ 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			
Identify needs for transboundary movement of samples, vaccines, specimen, reagent, and hazardous materials					
Identify needs for workforce and type of project workers		➢ 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			
Identify needs for using security personnel during construction and/or operation of HCF					
HCF design – general	- Structural safety risk; - Functional layout and engineering control for nosocomial infection				
HCF design - considerations for differentiated treatment for groups of higher sensitivity or vulnerable (the elderly, those with preexisting conditions, or the very	Some groups may have difficulty accessing health facilities				

young) and those with disabilities					
Design of facility should reflect specific treatment requirements, including triage, isolation or quarantine		➢ The design, set up and management of will take into account the advice provided by WHO guidance for Severe Acute Respiratory Infections Treatment Center. ➢ Hand washing facilities should be provided at the entrances to health care facilities in line with WHO Recommendations to Member States to Improve Hygiene Practices. ➢ Isolation rooms should be provided and used at medical facilities for patients with possible or confirmed COVID-19. ➢ Isolation rooms should: ✓ 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.			

Design to consider mortuary arrangements	Insufficient capacity Spread of infection	➢ Include adequate mortuary arrangements in the design ➢ See WHO Infection Prevention and Control for the safe management of a dead body in the context of COVID-19)			
Identify the needs for an effective communication campaign on vaccination, including tailored outreach to different groups (including disadvantaged or vulnerable groups), with different partners					
Assess the capacity of the Borrower to establish effective vaccine cold chain temperature monitoring	Failure to store and handle vaccines properly can reduce vaccine potency, resulting in inadequate immune responses in patients and poor protection against disease	➢ Support the Borrower to design and establish or improve vaccine cold chain temperature monitoring plan. ➢ See WHO guidance on temperature monitoring[24] and CDC Vaccine storage and Handling toolkit[25]			
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.	➢ Support the Borrower to design and establish or improve surveillance system of AEFI. ➢ See WHO Global manual of surveillance of adverse events following immunization[26].			

[24] https://apps.who.int/iris/bitstream/handle/10665/183583/WHO_IVB_15.04_eng.pdf;jsessionid=9F079AFFA760DBD35C08B13930268B01?sequence=1
[25] https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html
[26] https://www.who.int/vaccine_safety/publications/Global_Manual_revised_12102015.pdf?ua=1

Table 2 - Environmental and Social Risks and Mitigation Measures during Construction Stage

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
Clearing of vegetation and trees; Construction activities near ecologically sensitive areas/spots	- Impacts on natural habitats, ecological resources and biodiversity				
General construction activities Foundation excavation; borehole digging	- Impacts on soils and groundwater; - Geological risks				
General construction activities	- Resource efficiency issues, including raw materials, water and energy use; - Materials supply				
General construction activities – general pollution management	- Construction solid waste; - Construction wastewater; - Nosie; - Vibration; - Dust; - Air emissions from construction equipment				
General construction activities – hazardous waste management	- Fuel, oils, lubricant				
General construction activities – Labor issues	- Workers coming from infected areas - Co-workers becoming infected	- Refer to COVID-19 LMP if available. - Consider ways to minimize/control movement in and out of construction areas/site.			

	- Workers introducing infection into community/general public	- 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 - 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			
General construction activities – Occupational Health and Safety (OHS)					
General construction activities – traffic and road safety					
General construction activities – security personnel					
General construction activities – land and asset	Acquisition of land and assets				
General construction activities	GBV/SEA issues				
General construction activities – cultural heritage	Cultural heritage	Chance-finds procedure			
General construction activities – emergency preparedness and response					
Construction activities related to *onsite* waste management facilities,					

including temporary storage, incinerator, sewerage system and wastewater treatment works					
Construction activities related to demolition of existing structures or facilities (if needed)					

Table 3 - Environmental and Social Risks and Mitigation Measures during Operational Stage

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
General HCF operation – Environment	General wastes, wastewater and air emissions				
General HCF operation – OHS issues	- Physical hazards; - Electrical and explosive hazards; - Fire; - Chemical use; - Ergonomic hazard; - Radioactive hazard				
HCF operation – Labor issue					
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)					
HCF operation – cleaning		• 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).			
HCF operation - Infection control and waste management plan					
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	Develop infection control and waste management plan for vaccination program to consider the use of non-HCF for deployment			

Waste minimization, reuse and recycling	Use of incinerators results in emission of dioxins, furans and particulate matter	➢ 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 ➢ If small-scale incinerators are used, adopt best practices to minimize operational impacts.			
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	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.			
Transport of goods or supplies, including the delivery, storage and handling of vaccine,	COVID-19 is spread by drivers during the transport and distribution of goods or supplies.	Good hygiene and cleaning protocols should be applied. During the transport, truck drivers should be required to wash hands frequently and /or be provided			

specimen, samples, reagents, pharmaceuticals and medical supplies	Traffic accidents occur during transportation of goods	with hand sanitizer, and taught how to use it. Measures to minimize impacts during transportation, including hazardous materials can be found in the EHSGs.			
Waste segregation, packaging, color coding and labeling					
Onsite collection and transport					
Waste storage					
Onsite waste treatment and disposal					
Waste transportation to and disposal in offsite treatment and disposal facilities					
Transportation and disposal at offsite waste management facilities					
HCF operation – transboundary movement of vaccine, specimen, samples, reagents, medical equipment, and					

infectious or hazardous materials					
Operation of acquired assets for holding potential COVID-19 patients					
Emergency events	- 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	➢ Emergency Response Plan			
Mortuary arrangements	- Arrangements are insufficient - Processes are insufficient	➢ 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) ➢ 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)			

Vaccination campaign - considerations for communication and outreach for disadvantaged or vulnerable groups					
Stakeholder engagement – considerations for simple, accurate, accessible and culturally appropriate information dissemination; combating misinformation; responding to grievances					
Targeting of beneficiaries is not done in a fair, equitable and inclusive manner	Lack of transparency about the vaccination program	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	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	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 are included in project activities and benefits			
	SEA/SH increase in project area (e.g. requests for sexual favors to receive vaccinations)	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			
Use of police/military/security personnel in the deployment of vaccines					

Table 4 - Environmental and Social Risks and Mitigation Measures during Decommissioning

Key Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
Decommissioning of interim HCF					
Decommissioning of medical equipment					
Regular decommissioning					
To be expanded					

III. Infection Control and Waste Management Plan (ICWMP) Template

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 EHS Guidelines for Healthcare Facilities and pertaining 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 ICWMP

Activities	Potential E&S Issues and Risks	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
General HCF operation – Environment	General wastes, wastewater and air emissions				
General HCF operation – OHS issues	- Physical hazards; - Electrical and explosive hazards; - Fire; - Chemical use; - Ergonomic hazard; - Radioactive hazard.				
HCF operation - Infection control and waste management plan					
Waste minimization, reuse and recycling					
Delivery and storage of specimen, samples, reagents, pharmaceuticals and medical supplies					
Storage and handling of specimen, samples, reagents, and infectious materials					

Waste segregation, packaging, color coding and labeling					
Onsite collection and transport					
Waste storage					
Onsite waste treatment and disposal					
Waste transportation to and disposal in offsite treatment and disposal facilities					
HCF operation – transboundary movement of specimen, samples, reagents, medical equipment, and infectious materials					
Emergency events	- 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;	Emergency response plan			

	- Fire; - Other emergent events				
Operation of acquired assets for holding potential COVID-19 patients					

IV. Resource List: COVID-19 Guidance

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

- Global manual on Surveillance of adverse events following immunization, issued 2016
- How to monitor temperature in the vaccine supply chain, issued July 2015

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

MFI GUIDANCE

- EBRD COVID-19 resources (includes list of websites providing information on Covid-1(and guidance materials and resources provided by IFIs)
- 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
- CDC Vaccine Storage and Handling Toolkit, issued 2020

VI: Relevance of WB ESS for the project

WB ESS	Relevancy	Relevance to the project
ESS 1: Assessment and management of environmental and social risks and impacts	Relevant	E&S risks and impacts are expected to be significant in the project. The activities associated with subcomponent 1.2. generate some adverse E&S impacts as it aims to strengthen bio-safety measures in selected hospitals with better health care waste management, bio-hazard management measures - autoclaves, handling of infected materials, and management of corpses suspected/infected with the disease. Considering that the project's major activities will be executed in the existing premises of the hospitals, it is critical to maintaining the health and safety of health workers, patients including those infected by COVID-19, hospital staff, visitors, and nearby communities throughout the project lifecycle. The sub-component also involves civil works for repair and renovation of existing infrastructure, and it may create additional E&S issues, particularly with an increase in environmental pollution with waste, noise, dust, air pollution, and workers' health and safety issues. However, all the potential environmental risks and impacts are predictable, expected to be temporary and reversible, low in magnitude, and site-specific. An Environmental and Social Management Framework has been drafted to identify risks and impacts and recommend mitigating measures.
ESS 2: Labor and working conditions	Relevant	The social risks and impacts to frontline health workers, construction workers, and technicians involved in constructing new facilities in the hospitals that are in operation and providing medical services to COVID-19 patients are expected to be significant. Thus, serious attention is required to ensure the safety of frontline health workers and other workers who will be involved in different activities. In the absence of huge construction activities, chances of a huge labor influx-related social impacts are less likely. However, repair and renovation of existing infrastructure particularly for ICU beds, safe water, and sanitation, as envisaged in subcomponent 1.2, will involve some workforce and technicians. The majority of the "direct workers" will be contracted locally while technical "contacted workers" for installing sophisticated medical equipment

WB ESS	Relevancy	Relevance to the project
		may be hired from within the country or abroad. A Labor-Management Procedures with a strong application of Occupational Health and Safety (OHS) Procedures will need to be developed.
ESS 3: Resource efficiency and pollution prevention and management	Relevant	Proposed repair and renovation of existing infrastructure particularly for ICU beds and installation of associated equipment and infrastructures for waste storage and treatment might increase noise, dust, and air pollution. Given that most of the activities have been planned in the hospitals that are in operation, the pollution issues are likely to be more complex. Besides, there is also a need for serious attention in the management of solid waste, particularly in the handling of infected materials and corpses suspected/infected with the disease. Similarly, there will be a need for a proper plan to deal with the management of the solid wastes produced during construction and installation of equipment, particularly the packaging materials that come with the equipment. Given the nature of the activities of the project, issues related to the consumption of water seems to nominal. However, water efficiency technology will be adopted in construction. Similarly, medical equipment that will be installed in the new infrastructure will be energy efficient.
ESS 4: Community health and safety	Relevant	Implementation of project activities, particularly civil works, may have community health and safety implications. Given the highly contagious nature of the COVID-19 diseases, there is a need to take maximum precautions to control the possible spread of diseases in the community. Additionally concerns around Life and Fire Safety on account of storage and use of therapeutic oxygen in the treatment of COVID-19. Thus, the ESMF includes the assessment of risks and impacts to the community such as excessive construction noise and dust levels, site safety awareness, and access restrictions and mitigation measures by adopting adequate OHS and community health and safety protocols for WBG EHS Guidelines.

WB ESS	Relevancy	Relevance to the project
ESS 5: Land acquisition, restrictions on land use and involuntary resettlement	Not Currently Relevant	The project does not include activities that would require land acquisition, leading to the physical or economic displacement of the people. There will be no land-based impact.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant	This ESS is not expected to be relevant because the project activities, will be constructed in existing premises and is not anticipated to affect or involve any impacts on biodiversity or natural resources.
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant	Nepal is culturally diverse country, hosting multiple ethnic groups including 59 indigenous groups or nationalities. Of the total population, the indigenous people account for about 37 percent. The project is unlikely to pose adverse impacts to indigenous people as the project doesn't aim to acquire or put the restriction in the use of land or take land on a lease that belongs to indigenous peoples for the project activities. However, the possibility of exclusion or restriction of indigenous peoples to the project's benefits and medical services cannot be ruled out. ESMF will provide specific measures to ensure there is meaningful consultation with representative institutions of relevant affected indigenous peoples at different levels and to ensure they are not deprived of opportunities offered by the project.
ESS 8: Cultural Heritage	Not Currently Relevant	Given the nature of activities under this project, which will be confined within the existing medical premises, the chances of impacts on culture and heritage are not expected.
ESS 9: Financial Intermediaries (FIs)	Not Relevant	No FI involvement is envisaged in the project.

WB ESS	Relevancy	Relevance to the project
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant	The project will ensure that it will adopt a consistent, comprehensive, coordinated, and culturally appropriate approach for engaging stakeholders and disclosing project related information. For the project, targeted stakeholders include all the patients including those infected by COVID-19, health workers, hospital staff, medical equipment manufacturers and suppliers, public and private academic medical institutions, medical teachers and students, faculty members, management staff, research institutes, and federal and provincial governments. To implement the approach, the project has prepared the Stakeholder Engagement Plan (SEP) and implemented to ensure that stakeholder engagement activities are effective and meaningful.

Notes

[i] See https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-WASH-2020.4
[ii] See https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-2020.4
[iii] See https://apps.who.int/iris/handle/10665/331329
[iv] See https://apps.who.int/iris/handle/10665/331138
[v] See WHO-2019-nCoV-IHR_Quarantine-2020.3-eng
[vi] See https://www.who.int/publications/i/item/risk-communication-and-community-engagement-readiness-and-initial-response-for-novel-coronaviruses
[vii] See WHO-2019-nCoV-HCF_assessment-Products-2020.2-eng
[viii] See https://www.who.int/vaccine_safety/publications/Global_Manual_revised_12102015.pdf?ua=1
[ix] See Government of Nepal, 2014, Health Care Waste Management Guideline, Ministry of Health and Population, Department of Health Services, accessible at: http://www.mohp.gov.np/attachments/article/314/Health%20Care%20Waste%20Management%20Guideline-MOHP%202014.pdf