REPUBLIC OF IRAQ

EMERGENCY COVID-19 PROJECT

(P177038)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

SEPTEMBER 2021

LIST OF ACCRONYMS

AEFI	Adverse Effects Following Immunization
AF	Additional Financing
CBO	Community Based Organization
COC	Code of Conduct
COVAX	COVID-19 Vaccines Global Access
EHS	Environmental Health and Safety
EODP	Emergency Operations for Development Project
EPR	Emergency Preparedness and Response
ESCP	Environment and Social Commitment Plan
ESMF	Environmental and Social Management Framework
ESRS	Environmental and Social Risk Classification
ESS	The following Environmental and Social Standards
EUL	WHO Emergency Use Listing .
FEFO	First to Expire First Out
GIIP	Good International Industry Practices
GNI	Gross National Income
GOI	Government of Iraq
GRM	Grievance Redress Mechanism
HCF	Health Care Facility
ICWMP	Infection Control and Waste Management Plan
IDPs	Internally Displaced Populations
LMP	Labor Management Plan
M&E	Monitoring and Evaluation
MENA	Middle East and North Africa
MIS	Management Information System
MOHE	Ministry of Health and Environment
MOU	Memorandum of Understanding

NCD	Non-communicable diseases
NGO	Non-Governmental Organization
OOP	Out-Of-Pocket
PDO	Project Development Objective
PMT	Project Management Team
PPE	Personal Protective Equipment
SEA/SH	Sexual Exploitation and Abuse/ Sexual Harassment
SEP	Stakeholder Engagement Plan
SRAs	Stringent Regulatory Authorities
TOR	Terms Of Reference
TPMA	Third Party Monitoring Agency
UHC	Universal Health Coverage
UNCBD	UN Convention for Biological Diversity
UNCCD	UN Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
UPS	Uninterruptible Power Supply
UTL	Ultra Low Temperature
VAC	Vaccine Approval Criteria
VIRAT	Vaccine Introduction Readiness Assessment Tool
VRAF	Vaccine Readiness Assessment Framework
WB	World Bank
WHO	World Health Organization

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EXECUTIVE SUMMARY

1. Background

a. Introduction

Iraq is one of the countries hardest hit by COVID-19 in the Middle East and North Africa (MENA) region As of August 29, 2021, Iraq has recorded a total of 1,874,435 confirmed cases and 20,699 deaths. The daily number of new cases gradually declined from the peak of 5,055 cases on September 24, 2020, only to start rising again from the beginning of February 2021. A third wave is currently underway, with 13,515 cases reported on July 28, 2021 - the highest number of daily cases reported to date since the start of the pandemic. As of August 29, 2021, a total of 5,156,720 COVID-19 vaccine doses have been administered. Of the total number of vaccinated people 3,274,154 received one dose covering approximately 8 percent of total population, while 1,749,134 have been fully immunized with two doses covering approximately 4 percent of total population.

The project will provide upfront financing to help the government purchase and deploy COVID-19 vaccines from a range of sources that meet the World Bank's Vaccine Approval Criteria (VAC). The financing will enable affordable and equitable access to COVID-19 vaccines for approximately 7 percent of the country's population and help ensure effective vaccine deployment in Iraq through vaccination system strengthening. In particular, it will support the country in procuring additional doses through direct supply agreements with vaccine manufacturers in order to build a portfolio of options to expand Iraq's access to vaccines under the right conditions (e.g., of value-for-money, regulatory approvals, and delivery time among other key features). As of April 16, 2021, the World Bank will accept as threshold for eligibility of IBRD/IDA resources in COVID-19 vaccine acquisition and/or deployment under all World Bank financed projects: (i) the vaccine has received regular or emergency licensure or authorization from at least one of the Stringent Regulatory Authorities (SRAs) identified by the World Health Organization (WHO) for vaccines procured and/or supplied under the COVID-19 Vaccines Global Access (COVAX) Facility, as may be amended from time to time by WHO; or (ii) the vaccine has received WHO Prequalification (PQ) or WHO Emergency Use Listing (EUL). As vaccine development is rapidly evolving, the World Bank's VAC may be revised. All vaccines financed by the World Bank will be provided free of charge, and no user fees will be levied. The project financing enables a portfolio approach that will be adjusted during implementation in response to developments in the country's pandemic situation and the global market for vaccines.

Table 2 Priority Groups for Vaccination in Iraq.

Phase	Category/population group	Population number	Risk category	Percentage of population
Phase 1 A	Health workers[1]	100,000	High risk	0.2%
	Elderly	450,000	≥70 years old	1.1%
	People with chronic disease	750,000	>2 chronic diseases	1.7%
	Cancer and immune-deficiency patients	30,000		0.07%
Phase 1 B	Health workers	300,000	Moderate risk	0.7%
	Elderly	1,350,000	≥60 and < 70 years old	3.2%
	People with chronic disease	1,250,000	2 chronic diseases	3.0%
	Patients with hereditary blood diseases	20,000		0.03%
Phase 2	Health workers	100,000	Low risk	0.2%
	Elderly	2,700,000	≥50 and < 60 years old	6.5%
	People with chronic disease	2,000,000	1 chronic disease	4.8%
	Security personnel[2] at high risk of exposure to cases	100,000	High risk	0.2%
	Displaced populations/refugees living in camps	500,000	Moderate risk	1.2%
	Social care staff and residents, prisons staff and prisoners	200,000		0.5%
Phase 3	Security personnel at moderate risk of exposure to cases	900,000	Moderate risk	2.2%
	People working in professions at risk of exposure	300,000	≥40 and <50 years old	0.7%

Phase 4	Security personnel at low risk of exposure	500,000	Low risk	1.2%
	People working in professions at low risk of exposure[3]	1,000,000	< 40 years old	2.4%
		12,550,000	TOTAL	30%

[1] MOHE will categorize its staff into these three categories and that high risk will come in phase 1A, moderate in phase 1B, and low in phase 2.

[2] Security personnel are classified into three categories: i) high risk are those in direct contact with people (e.g. security of governmental facilities, at check points, traffic police); ii) intermediate risk (e.g. in barracks, working in groups); and iii) low risk, including administrative staff.

[3] Including employees of border points and train stations, educational staff, butchers, barbers, restaurants and bakeries workers, prisoners and State bodies staff.

Note: Total population in 2021 is estimated at 41,190,700 (Iraq Central Statistics Agency).

The project will play a critical role in enabling affordable and equitable access to COVID-19 vaccines in Iraq. Improved access to vaccination is needed to limit the spread of the disease and lessen the burden on the already weak health system. The project activities will build on the ongoing World Bank's COVID-19 response and health sector support, as well as the support of other development partners

b. Project Development Objectives

***Project Development Objective (PDO) statement*:** The development objective is to support the Government of Iraq in the acquisition and deployment of COVID-19 vaccines.

PDO level indicator:

- Percentage of specific priority populations fully vaccinated (total and disaggregated by sex)
- Percentage of COVID-19 vaccination sites with adequate health care waste management for vaccination.
- Number of COVID-19 vaccine doses acquired through World Bank financing.

c. The Environment and Social Management Framework

The World Bank requires the Borrower to develop an Environment and Social Management Framework (ESMF) that will guide the Project Management Unit (PMU) during implementation.

2. Project Description

a. Project Components

The project consists of the following two components and subcomponents:

Component 1: COVID-19 Vaccines and Deployment (US$97 million IBRD). The component will support the purchase of COVID-19 vaccines and related deployment activities.

Sub-component 1.1: COVID-19 Vaccine Support **(US$72 million IBRD).** This subcomponent will support the purchase of approximately 6 million doses of the COVID-19 vaccines that meet the World Bank's VAC. This is expected to cover 3 million individuals or approximately 7 percent of the population in Iraq. Given the recent emergence of COVID-19, there is no conclusive data available on the duration of immunity that vaccines will provide. While some evidence suggests that an enduring response will occur, this will not be known with certainty until clinical trials follow participants for several years. As such, the financing will allow for re-vaccination efforts if they are warranted by peer-reviewed scientific knowledge at the time. In the case that re-vaccination is required, limited priority populations (such as health workers and the elderly) will need to be targeted for re-vaccination given constraints on vaccine production capacity and equity considerations (i.e., tradeoffs between broader population coverage and re-vaccination).

Sub-component 1.2: Support for Deployment of COVID-19 Vaccines **(US$25 million IBRD).** This sub-component will support system strengthening to successfully deliver COVID-19 vaccines at scale. This will include, inter alia, (i) procurement of equipment for health care waste management (minor electrical wiring might be required) , (ii) support for refining the electronic registration system for vaccination, (iii) vaccine logistics and supply chain management; (iv) communication initiatives to address vaccine hesitancy, (v) monitoring and management of adverse effects following immunization (AEFI) , and (vi) any other necessary technical assistance and non-salary operating costs for vaccine rollout. The project will prioritize supporting Iraq to address the key gaps identified by the readiness assessment, in close coordination with WHO, UNICEF and other development partners. Given the uncertainties surrounding COVID-19 vaccination, the activities will be updated throughout project implementation through time-bound work plans agreed with the MOHE. Collaboration is envisioned with other World Bank Global Practices in defining, to the extent possible, sustainable and high-efficient energy solutions to improve the deployment of vaccines. Technical assistance can be provided to ensure that energy efficiency standards for upgraded cold chain are applied for COVID-19 vaccines and beyond, including through the development of micro-plans to integrate climate-related considerations (e.g. energy efficiency or promotion of hybrid energy source consumption for cold chain). The project will also support the procurement of effective and low-emissions health care waste management equipment that will also contribute to improving the resilience of health care waste management systems to extreme precipitation. In addition, the financing will support the implementation of the COVID-19 communication action plan by the MOHE and hired firms. Communication campaigns will be tailored where necessary for specific groups (e.g. women in rural groups, IDPs) and include information on procedures/plans in case of extreme weather or other climate-change-induced events.

Component 2: Project Management and Monitoring and Evaluation (M&E) (US$3 million IBRD and Trust Fund). This component will support the coordination, implementation, and management of project activities, including third party monitoring.

Sub-component 2.1. Project Management and M&E (US$1 million IBRD) will support the coordination, implementation, monitoring and evaluation, and management of project activities, including through: (i)

development of a system for project monitoring and evaluation; and (ii) provision of relevant technical assistance to support the MOHE in the implementation, management, monitoring and evaluation of the project, including through operating costs and ensuring compliance with the Environmental and Social Commitment Plan. Specifically, this may include support for (i) the supervision by MOHE teams of the deployment of COVID-19 vaccines and installation, functionality, and use of equipment and supplies acquired under the project; (ii) development of a system for project monitoring and evaluation by the PMU team; (iii) hiring of an external auditor for the project; (iv) hiring of a media production company to assist with the production of relevant materials for dissemination to project beneficiaries.. This component will monitor COVID-19 vaccines deployment and therefore improve data collection, analysis, reporting and use of data for action and decision-making. Climate and gender-specific activities supported by the project will also be monitored.

Sub-component 2.2. Third Party Monitoring (US$ 2 million Trust Fund). A third-party monitoring agency (TPMA) will be contracted by the MOHE using grant financing from I3RF. The TPMA will be responsible for monitoring compliance of the vaccination efforts with Iraq's NDVP and WHO standards, as well as World Bank technical, environmental, and social requirements. A draft terms of reference (TOR) has already been prepared. The final TOR will be subject to World Bank technical approval, defining the specific roles and responsibilities of the TPMA. The TPMA role can be fulfilled by a United Nations (UN) agency (or agencies), international or local non-governmental organizations (NGO), or consulting firms that meet the criteria agreed upon between the World Bank and MOHE.

3. Policy, Legal and Regulatory Framework

a. National Legislations and Regulations

The project is subject to the following Iraqi laws and regulations:

1. Law no. 27 of 2009 on the Protection and Improvement of the Environment
2. Regulations no. 2 of 2001 on Preservation of Water Resources
3. Instructions No. 1 of 2015: Management of Health Facilities Waste
4. Article No.15 from Instruction No.3 of 2011: Locations of hazardous waste disposal sites
5. Law No. 37 of 2015 Iraqi Labor Law
6. Instruction no. 12 of 2016: Occupational Health and Safety
7. Law No. 6 of 1988 concerning the National Commission for Occupational Hygiene and Safety governs the enforcement of occupational health and safety regulations.

b. Conventions and Treaties signed and ratified by Iraq

- UN Convention for Biological Diversity (UNCBD) acceded 2008;
- UN Convention to Combat Desertification (UNCCD) signature 2010;
- RAMSAR Convention on Wetlands acceded signed 2008;
- United Nations Framework Convention on Climate Change (UNFCCC) signed2009
- Kyoto Protocol signed 2009
- Basel Convention on the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal acceded 2011

- Core Conventions of the ILO: C29 (Forced Labour) (ratified 1962), C98 (Right to Organize and Collective Bargaining) (ratified 1962), C100 (Equal Remuneration) (ratified 1963), C111 (Discrimination, Employment and Occupation) (ratified 1959), C138 (Minimum Age Convention) (ratified 1985), C182 (Elimination of the Worst forms of Child Labour) (ratified 2001).
- Stockholm Convention of the persistent organic pollutants
- Minamata Convention on Mercury
- Rotterdam Convention for prior informed consent.
- Vienna Convention for the Protection of the Ozone Layer

c. World Bank Environment and Social Framework

The Environmental and Social Framework (ESF) enables the World Bank and Borrowers to better manage environmental and social risks of projects and to improve development outcomes.

The following Environmental and Social Standards (ESS) are applicable to the Project:

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

d. The World Bank Group Environmental Health and Safety (EHS) Guidelines

The applicable EHS guidelines are the following:

- EHS Section 1.5 – Hazardous Materials Management;
- EHS Section 2.5 – Biological Hazards;
- EHS Section 2.7 – Personal Protective Equipment (PPE);
- EHS Section 2.8 – Special Hazard Environments
- EHS Section 3.5 – Transport of Hazardous Materials; and
- EHS Section 3.6 – Disease Prevention.
- EHS Section 4.2 – Occupational Health and Safety
- EHS Section 4.3 – Community Health and Safety

The EHS for Health Care Facilities (HCF) also apply to the project. The EHS Guidelines for Health Care Facilities include information relevant to the management of EHS issues associated with HCFs 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.

e. Additional Guidelines

World Bank Technical Note on Public Consultations and Stakeholder Engagement.

World Health Organization (WHO) Guidance. The WHO has created a web-based platform for guidance on issues related to COVID-19. These technical guidance documents are evolving, and they are being updated regularly as new information becomes available and cover the following topics:

(i) infection prevention and control, (ii) rights, roles and responsibilities of health workers, including key considerations for occupational safety and health, (iii) water, sanitation, hygiene and waste management, (iv)Safe management of waste from health care faculties (v) rational use of PPE, (vi) vaccine readiness assessment, (vii) surveillance of adverse events following immunization[1].

World Bank Technical Note: Use of Military Forces to Assist in Covid-19 Operations Suggestions on How to Mitigate Risks.

8. Environmental and Social Baselines

a. Healthcare Waste Treatment

The vaccination process entails OHS risks through transmissions of the COVID-19 virus from vaccinees or HCF staff and through medical waste. An Infection Control Waste Management Plan (ICWMP) is included in the ESMF. The ICWMP details the requirements for preventing worker, vaccinee and community infection from the vaccination process and the generated medical waste.

b. Social Baseline

i. Socio-economic Baseline relevant to COVID 19

Iraq is a large upper-middle income country with a gross national income (GNI) per capita of US$ 4,660 and a population of 40.15 million in 2020. Unemployment remained more than 10 percentage points higher than the pre-pandemic level. An additional 2.7 to 5.5 million Iraqis could become poor due to the COVID-19 crisis. This is in addition to the 6.9 million Iraqis already living in poverty. A large vaccination campaign is a key element for future recovery from the health and economic impact of the COVID-19 pandemic. The priority assessment for COVID-19 vaccination has taken into consideration priority groups from a medical and a social perspective.

ii. Gender

Gender inequities and norms influence access to critical health services, as well as risk of exposure to disease, particularly in emergency situations and pandemics. Factors that constrain access to and use of health services by women in Iraq include limited mobility and financial capacity, competing demands of paid and unpaid work, and limited access to information. The reported incidence of COVID-19 is higher among men than women – 59% of registered COVID-19 cases in Iraq to date were among men. Moreover, women have also been impacted by the discontinuity of essential RMNCAH-N services, including for maternal and sexual and reproductive health, and GBV.

[1] https://www.who.int/vaccine_safety/publications/aefi_surveillance/en/

iii. Sexual Harassment, Sexual Exploitation and Abuse

Recent global and regional reports have shown an alarming increase in GBV cases during the pandemic, in particular domestic violence. Many of the measures necessary for controlling a viral outbreak have also significantly limited the ability of survivors to shield themselves from their abusers, or access support mechanisms. Iraq is no exception. The GBV Information Management System (GBVIMS) has recorded a marked rise in the number of reported incidents of violence in 2020.[2]

While the Government of Iraq has been taking steps to end gender-based violence at the national level, such risks are still relevant to the project implementation and relevant GBV prevention, risk mitigation and responsive actions will be put in place for the project (please see in Chapter 5 below).

9. Environmental and social risk and mitigation

The environmental and social risks associated with the Project are expected to be substantial. It is also anticipated that the project will have positive social impacts both at the individual and community levels. The risks are detailed in the main reports and listed here below:

a. Environmental Risks

1. Medical waste
2. Occupational Health and Safety
3. Logistical challenges in transporting vaccines across the country in a timely manner, adhering to the recommended temperature and transportation requirements and traffic/road safety risks associated with transporting vaccines as well as with handling, transportation,
4. Preventing the risks of health and safety issues related to unforeseen effects of vaccination
5. Increase of water and energy use.
6. Fires

b. Social Risks

1. Unequal access for marginalized and vulnerable social groups including disabled, elderly, women, Internally Displaced Populations (IDPs) and refugees to access vaccines, people without access to internet/phone and illiterate people
2. Social conflict, and risks to human security resulting from limited availability of vaccines and social tensions related to the challenges of a pandemic situation
3. Sexual Exploitation and Abuse/ Sexual Harassment (SEA/SH) risks
4. Inappropriate data protection measures
5. insufficient/not effective stakeholder communication on the vaccine roll-out strategy
6. The risk of elite capture and/or corruption as the COVID-19 vaccine will be in short supply relative to the demand
7. Risk to labor other than OHS such as from unlawful actions by employer, injury in the workplace mainly electrocution

[2] Gender Based Violence Information Management System Annual Narrative Report. January – December 2020. https://iraq.unfpa.org/sites/default/files/resource-pdf/gbvims_narrative_report_of_2020.pdf

8. Security risks in vaccine transport and in vaccination centers
9. Forced vaccination
10. Transport risk (road accidents)

Environmental and social risks will be mitigated as needed. The ESMF includes a list of these and other risks, their impacts and possible mitigation measures. Environmental and OHS risks will be mitigated through the ICWMP, and social risks through the SEP, awareness raising and Codes of Conduct. The Army will ensure transport and vaccination site security.

10. Consultation and Disclosure

The WB's mandatory Policy on Disclosure applies to this project. Under this requirement, the ESMF and other instruments related to environmental and social aspects of the project have to be publicly consulted and disclosed prior to project appraisal and negotiations.

In accordance with WB policies, stakeholders' consultation was conducted during the preparation of the ESMF. In line with the available resources for carrying out stakeholder engagement in the context of COVID-19 and the WB's "Technical Note: Public Consultations and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings" (March 20, 2020), the project avoided public gatherings and the consultations were done virtually as per the following steps:

1. The draft of the addendum to the ESMF for Iraq COVID-19 Vaccination Project was distributed in a digital form to stakeholders.
2. A virtual meeting was held on June 24, 2021. Participants included representatives of government agencies, experts in health, marketing and communication, etc. Annex V provides the list of participants.
3. The ESMF was disclosed through a presentation and a series of questions.
4. Feedback and suggestions received during consultation were be taken into account in the ESMF.
5. The PMU plans to hold similar consultation meetings throughout the project.

11. Stakeholder Engagement

During the project preparation, a virtual consultation meeting was conducted by the PMU and attended by 43 different stakeholders. Stakeholders were invited to share their thoughts, questions and concerns regarding the project setup and the associated environmental and social risks. Further to the consultation, a SEP was prepared and disclosed. The PMU is planning to hold consultation meetings throughout the Project life cycle and with a possibility of adding relevant stakeholders according to the needs of the project. Stakeholders' meetings will also take place when there is a need and per the findings of the GM. Stakeholders identified in the SEP and new identified stakeholders will be reflected in an updated SEP as required which will be updated and re-disclosed as needed. All stakeholders will be kept informed as the project develops, including reporting on project

environmental and social performance and implementation of the stakeholder engagement plan and grievance mechanism.

Refer to SEP, including the GM accessible to the public, developed separately for this project

12. Project Implementation Arrangements, Responsibilities and Capacity Building

The MOHE will be the implementing agency for the project. A third-party monitoring agency (TPMA) will be contracted by the MOHE. Progress towards project objectives and results indicators will be monitored by the PMU. Partner agencies have potential supportive roles in the NDVP as detailed below:

It is to be noted that the budget for the implementation of the ESMF is included in the Project budget under different components and will be supported through the project resources.

Box 1: Roles for Partner Agencies in COVID-19 Vaccination in Iraq

WHO	Financing amount (if known)
• Providing technical support for vaccine introduction and deployment, including strategies, vaccine safety issues, development guidelines, conducting of training on Adverse Events Following Immunization (AEFI) surveillance for COVID-19 vaccine related issue and other issues of vaccine pharmacovigilance	N/A
UNICEF	**Financing amount (US$)**
• Supporting the development of a roadmap for integration of COVID-19 vaccine deployment with Expanded Program on Immunization (EPI) and other primary health care (PHC) services; quantification and forecasting of supply needs; cold chain assessment, procurement and maintenance • Acting as the procurement agent for the COVID 19 vaccine through the COVAX facility and facilitating the procurement and delivery of vaccines • Supporting the communication strategy and community engagement • Supporting the establishment of a robust information system for data management, monitoring and reporting, etc.	$1,000,000 (for procurement and to fund various PHC services and supplies; cold chain; training of personnel etc.) $150,000 (communications) $100,000 (Management Information System (MIS))

13. The Infection Control and Waste Management Plan

The ESMF includes an Infection Control and Waste Management Plan (ICWMP). The ICWMP details the requirements for preventing worker, vaccinee and community infection with COVID-19 from the

vaccination process and the generated medical waste. Staff of vaccination centers should take all necessary precautions (PPEs, Triage, checking temperatures of vaccinees, disinfection…) in order to reduce the risk of COVID-19 infection to staff, vaccinees and the community. Medical waste generated from the vaccination process should be treated through autoclave shredders and/or incinerators in order to reduce the risk of infection and pollution of natural resources.

14. The Labor Management Plan

The ESMF comprises a Labor Management Plan (LMP). The LMP describes the different types of workers involved in the project. It details the Iraqi legal context for labor as well as the WB requirements that need to be complied with by all employers on the project. Labor can present grievances through the labor GRM and expect resolution.

15. Gender-Based Violence Action Plan

The ESMF includes a Gender-Based Violence Action Plan GBVAP. The GBVAP forms the basis for operationalizing the results and recommendations of the gender analysis. It contains specific gender elements to be considered in the Project design and during the implementation of Project measures and activities. Moreover, it helps to monitor implementation of these measures and activities. Hence, the GBVAP ensures an effective gender mainstreaming and integration of a consistent gender-perspective in the Project in order to maximize development co-benefits. The aim is to promote opportunities, drivers of change and positive gender dynamics as well as to manage and mitigate potential adverse risks over the duration of the Project

16. Risks and Mitigation Measures in Using Security Forces

Due to ongoing conflict and instability in the country, the Project will require appropriate security arrangements for the safe deployment of vaccines. Upon request by Pfizer, the National Coordination Committee issued a decision for the security forces to accompany the distribution of Pfizer's shipments. The military will provide security for the vaccine transport vehicles and convoys and the vaccine storage locations. Police and Army will provide regular protection services to the vaccination facilities without interfering with allocation and access to vaccines nor the vaccination process and therefore will not be involved in the direct application of the vaccinations to the priority populations. Potential interaction between security forces and project workers and local communities may lead to conflict. Based on the nature of roles of security forces in this Project, the security personnel will have very limited direct interaction with communities and project workers. In such case, the potential social risks of using security forces are assessed as low to the proposed Project. The key social risks related to the use of security forces in this Project are potential non-compliance with the Code of Conduct. A Code of Conduct (CoC) has been prepared for all project workers (Please see Annex VIII). The CoC clearly indicates unacceptable behavior. To mitigate the potential risk, the MOHE will coordinate with the relevant security authorities to ensure that the CoC and other principles described in the ESCP will also be applied to the security personnel who will be deployed for the project and that use of force always be proportional to the nature of the incident. As per the SEP, the project GRM will address grievances raised by project stakeholders on unlawful or

abusive acts of security personnel. The implementation of these security mitigation measures will be monitored and reported as part of project monitoring/reporting processes.

MAIN REPORT

1 Background

1.1 Introduction

While Iraq has made progress with some health outcomes, the significant negative impact of conflicts and political instability is apparent in the poor performance of the health system. Iraq's life expectancy has increased by 2.3 years over the past decade, rising from 68.3 years in 2009 to 70.6 in 2019. There has been progress in child health and nutrition indicators; with under-5 mortality decreasing by more than 40 percent over the past two decades, falling from 44.9 deaths per 1000 live births in 1999 to 25.9 deaths in 2019. Despite such progress, Iraq still has some of the worst health outcomes among its peers, mostly driven by the continued conflict. The under-5 mortality rate is 1.4 times higher than the average for upper-middle income countries of 18.5 deaths per 1,000 live births. While Iraq is undergoing a demographic transition, with an increase in the working age share of the population, it still has one of the highest total fertility rates in the MENA region at 3.7. Maternal mortality ratio has been persistently high over the past two decades with fluctuations (75 in 2009, 92 in 2014, and 79 in 2019, deaths per 10,000 live births respectively). There are also regional and socio-economic inequities in terms of fertility, early childbirth, and family planning outcomes. Utilization of health services has decreased over the years, particularly at the primary care level, and inequities remain. For example, women in the poorest quintile are only 66 percent as likely to receive four or more antenatal care visits during their last pregnancy compared to those in the richest quintile. Child immunization rates in Iraq have not improved over the past decade and have remained significantly lower than those of peer countries. Due to conflict and instability, Iraq faces a significant challenge of delivering care to a large number of refugees and IDPs. In summary, Iraq performs poorly across most universal Universal Health Coverage (UHC) index indicators where the UHC effective coverage index stands at only 57.7.[3] Iraq's Human Capital Index is one of the lowest in the MENA region at 0.41 in 2020.[4]

Disadvantaged / vulnerable individuals or groups may be affected by a vaccination program either because they are disproportionately impacted, or because they are restricted in accessing the benefits of the project. The vulnerability may stem from person's origin, gender, age, health condition, economic

[3] Collaborators, G. 2. (2020, October 17). Measuring universal health coverage based on an index of effective coverage of health services in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. The Lancet, 396(10258), 1250-1284. Retrieved from https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30750-9/fulltext#%20

[4] World Bank (2020. Iraq Human Capital Index 2020 Brief. The World Bank Group: Washington, D.C. https://databank.worldbank.org/data/download/hci/HCI_2pager_IRQ.pdf?cid=GGH_e_hcpexternal_en_ext

deficiency and financial insecurity, disadvantaged status in the community (e.g. minorities or fringe groups), dependence on other individuals or natural resources, etc.

As detailed in the Stakeholders' Engagement Plan (SEP) that was consulted for and disclosed prior to appraisal, the vulnerable and disadvantaged groups identified for COVID-19 Vaccination Project include but are not limited to:

1. Women
2. Disabled
3. People with comorbidities
4. Elderly living alone
5. Poor households
6. Homeless people
7. Prison inmates
8. Minority groups
9. Refugees and the displaced
10. Foreign labor
11. Hard to reach populations in geographically remote locations

Non-communicable diseases (NCDs) have become the most significant cause of mortality and morbidity, representing 77.1 percent of deaths and 65.8 percent of disability-adjusted life years (DALYs) in 2019. In 2019, ischemic heart disease, stroke, diabetes, and chronic kidney disease were the top four causes of mortality in the country. The prevalence of the main NCD risk remains high: 21 percent of the population uses tobacco, 14 percent of the population has diabetes, 35.6 percent of the population has high blood pressure, 65 percent are overweight or obese, and 39.6 percent have elevated cholesterol.

The Iraqi health system is primarily financed by general government revenues and direct payments by households, and fiscal space has remained constrained. Over the past decade, per capita health spending in Iraq has fluctuated from a low of US$150.5 in 2010 to a high of US$239.4 in 2018. Despite recent increases, Iraq spends considerably less than peer countries per capita. Compared to its peers, Iraq also spends the lowest share of the total government budget on health (about 4.3 percent in 2019), a figure that has not changed considerably over the past decade. This results in an overreliance on Out-Of-Pocket (OOP) expenditures (representing 51.4 percent of current health spending in 2018) and limited financial protection for the population. population has limited financial protection. In 2017, about a third of the population incurred catastrophic health expenditures (i.e. spending more than 10 percent of their household expenditure on health), and 15 percent of households were pushed into poverty due to OOP health spending.[5]

Iraq is one of the countries hardest hit by COVID-19 in the Middle East and North Africa (MENA) region As of August 29, 2021, Iraq has recorded a total of 1,874,435 confirmed cases and 20,699 deaths. The daily number of new cases gradually declined from the peak of 5,055 cases on September 24, 2020, only

[5] World Bank (2021). Addressing the Human Capital Crisis: A Public Expenditure Review for Human Development Sectors in Iraq. The World Bank: Washington, D.C. http://documents.worldbank.org/curated/en/568141622306648034/Iraq-HD-PER-Final

to start rising again from the beginning of February 2021. A third wave is currently underway, with 13,515 cases reported on July 28, 2021 - the highest number of daily cases reported to date since the start of the pandemic. As of August 29, 2021, a total of 5,156,720 COVID-19 vaccine doses have been administered, Of the total number of vaccinated people 3,274,154 received one dose covering approximately 8 percent of total population, while 1,749,134 have been fully immunized with two doses covering approximately 4 percent of total population.

The project will provide upfront financing to help the government purchase and deploy COVID-19 vaccines from a range of sources that meet the World Bank's Vaccine Approval Criteria (VAC). The financing will enable affordable and equitable access to COVID-19 vaccines for approximately 7 percent of the country's population and help ensure effective vaccine deployment in Iraq through vaccination system strengthening. In particular, it will support the country in procuring additional doses through direct supply agreements with vaccine manufacturers in order to build a portfolio of options to expand Iraq's access to vaccines under the right conditions (e.g., of value-for-money, regulatory approvals, and delivery time among other key features). As of April 16, 2021, the World Bank will accept as threshold for eligibility of IBRD/IDA resources in COVID-19 vaccine acquisition and/or deployment under all World Bank financed projects: (i) the vaccine has received regular or emergency licensure or authorization from at least one of the Stringent Regulatory Authorities (SRAs) identified by the World Health Organization (WHO) for vaccines procured and/or supplied under the COVID-19 Vaccines Global Access (COVAX) Facility, as may be amended from time to time by WHO; or (ii) the vaccine has received WHO Prequalification (PQ) or WHO Emergency Use Listing (EUL). As vaccine development is rapidly evolving, the World Bank's VAC may be revised. All vaccines financed by the World Bank will be provided free of charge, and no user fees will be levied. The project financing enables a portfolio approach that will be adjusted during implementation in response to developments in the country's pandemic situation and the global market for vaccines.

The GOI, with the support of the World Bank and other Development Partners, has conducted the COVID-19 vaccine readiness assessment using the integrated Vaccine Introduction Readiness Assessment Tool (VIRAT)/Vaccine Readiness Assessment Framework (VRAF 2.0) instrument and drafted a comprehensive NDVP. Key findings of the VIRAT/VRAF 2.0 Assessment are summarized in Table 1

Table 1 Summary of Vaccination Readiness Findings of the VIRAT/VRAF 2.0 Assessment[6]

Readiness domain	Readiness of government	Key gaps to address during deployment
Planning, coordination, and regulation	• A National Coordinating Committee (NCC) and a National Technical Working Group (NTWG) have been established. The NCC is chaired by the Deputy Minister of Health for Technical Affairs. • The National Authority for Drug Selection issued Emergency Use Authorization (EUA) for the Pfizer vaccine on December 27, 2020, for AstraZeneca and Sinopharm vaccines on January 19, 2021, and for Sputnik vaccine on March 8, 2021. • The Council of Ministers issued a decree on February 20, 2021 authorizing the MOHE to sign contracts with vaccine manufacturers waiving liability. The Parliament adopted the Law on the Response to the COVID-19 Pandemic on March 8, 2021. The Law includes provisions for indemnity.	• Establishment of a mechanism for sub-national level coordination.
Costing, budgeting, and financial sustainability	• High level costing of NDVP has been completed for four different scenarios based on population coverage targets. • The GOI is exploring other funding sources to secure required doses to increase coverage (including World Bank support).	• The costing is expected to be updated periodically to reflect subsequent developments in additional vaccine purchase(s) and deployment.

[6] A multi-partner effort led by WHO and UNICEF developed the Vaccine Introduction Readiness Assessment Tool (VIRAT) to support countries in developing a roadmap to prepare for vaccine introduction and identify gaps to inform areas for potential support. Building upon the VIRAT, the World Bank developed the Vaccine Readiness Assessment Framework (VRAF) to help countries obtain granular information on gaps and associated costs and program financial resources for deployment of vaccines. To minimize burden and duplication, in November 2020, the VIRAT and VRAF tools were consolidated into one comprehensive framework, called VIRAT-VRAF 2.0.

Prioritization, targeting, surveillance	• Priority groups have been identified to ensure just, efficient, and timely vaccination of all eligible people willing to be immunized based on the below principles adapted for the Iraq situation:
	  ○ The WHO Strategic Advisory Group of Experts on Immunization (SAGE) values framework;
	  ○ The WHO SAGE prioritization roadmap;
	  ○ The fair allocation mechanism for COVID-19 vaccines through the COVAX Facility
	• Displaced individuals residing in camps are included.
	• The MOHE has developed a digital registry for vaccination.
	• Vaccine access was expanded to the entire adult population due to the short shelf-life of received vaccines and vaccine hesitancy.
		• Prioritization of beneficiaries will be a dynamic process based on multiple factors specific to context in Iraq (feasibility, expiration of available vaccine doses, groups at risk, and vaccine hesitancy amongst eligible groups).

Service delivery	• Fifty vaccination sites in hospitals (often teaching hospitals) were initially identified for the Pfizer vaccine which meet ultra-cold chain requirements. • As of August 31, 2021, there were 1301 vaccination sites. With the revised guidance for safe storage temperatures for Pfizer vaccine (up to 30 days from +2 to +8 degrees C), the Pfizer vaccine is now delivered at all vaccination sites. The number of sites can be expanded. • Plans for site readiness assessments are outlined.	• Microplanning for vaccination roll-out is underway.
Training and supervision	• Descriptions, roles, and broad estimates of staff and health workers for the campaign are outlined (including vaccination, supervision, communications and community, engagement, supply chain, logistics, monitoring, pharmacovigilance, and disease surveillance). • A training manual has been developed. The MOHE has conducted training for managers in all health departments, cold chain officials, and	• The preliminary estimates of vaccinators required may need to be updated. • A well-defined plan to mobilize human resources to ensure adequate numbers of health care workers at vaccination sites, including through task

	health workers at the designated vaccination sites with WHO and UNICEF support. • Mix of different staff and health workers that is required by each site for deployment specified.	shifting, adoption of multiple shifts, volunteers, needs to be developed.
Monitoring and evaluation & grievances redressal	• Data collection systems and tools to collect COVID-19 immunization data are outlined. • A vaccination record card has been developed and will include a hotline number for reporting adverse events.	• As part of the M&E framework, an information system including a vaccine registry and dashboard will be enhanced to monitor vaccine coverage, follow-up and issue vaccine certificates, and ensure data privacy. • A hotline for receiving grievances and addressing queries of beneficiaries will be set up.
Vaccine, cold chain, logistics, infrastructure	• The GOI has secured and distributed the required Ultra Low Temperature (ULT) freezers to the 50 designated sites for storing the Pfizer vaccine. • The estimated needs for ancillary supplies and Personal Protective Equipment (PPEs) are outlined and covered by KIMADIA. KIMADIA has already contracted for 6 million syringes for the Pfizer vaccine. • High level vaccine distribution and transportation networks are outlined in the NDVP.	• Detailed distribution plans are currently being developed.
Safety surveillance	• Vaccine safety surveillance approach is aligned with WHO recommendations to detect serious AEFIs to provide timely data that can be shared with relevant stakeholders for rapid action.	• AEFI plan is currently being finalized with preparations for training and implementation activities underway.

Demand generation and communication	• A demand generation and community engagement plan for optimizing the uptake of the COVID-19 vaccine has been developed in collaboration with the World Bank, UNICEF, and WHO and is included as an annex in the NDVP. • The communication and demand generation plan incorporates social and behavioral data from a national Facebook survey, which gathered data on vaccine hesitancy in the population; and is aimed at generating demand and improving acceptance of COVID-19 vaccine.	• Adoption of the communication by the high-level government bodies is instrumental in ensuring its successful implementation.

The GOI NDVP has all the key elements recommended by the World Health Organization and represents the blueprint for Iraq's vaccination efforts. According to the NVDP, Iraq seeks to vaccinate 30 percent of the total population by the end of 2021 and 70 percent coverage by the end of 2022. The NVDP identifies seven categories of prioritized populations, regardless of their citizenship status. The WHO SAGE Allocation Framework was used for the prioritization process, with modifications based on Iraq's context (i.e., significantly younger population and Fragility Conflict and Violence (FCV) status).

Table 2 Priority Groups for Vaccination in Iraq

Phase	Category/population group	Population number	Risk category	Percentage of population
Phase 1 A	Health workers[1]	100,000	High risk	0.2%
	Elderly	450,000	≥70 years old	1.1%
	People with chronic disease	750,000	>2 chronic diseases	1.7%
	Cancer and immune-deficiency patients	30,000		0.07%
Phase 1 B	Health workers	300,000	Moderate risk	0.7%
	Elderly	1,350,000	≥60 and < 70 years old	3.2%
	People with chronic disease	1,250,000	2 chronic diseases	3.0%

	Patients with hereditary blood diseases	20,000		0.03%
Phase 2	Health workers	100,000	Low risk	0.2%
	Elderly	2,700,000	≥50 and < 60 years old	6.5%
	People with chronic disease	2,000,000	1 chronic disease	4.8%
	Security personnel[2] at high risk of exposure to cases	100,000	High risk	0.2%
	Displaced populations/refugees living in camps	500,000	Moderate risk	1.2%
	Social care staff and residents, prisons staff and prisoners	200,000		0.5%
Phase 3	Security personnel at moderate risk of exposure to cases	900,000	Moderate risk	2.2%
	People working in professions at risk of exposure	300,000	≥40 and <50 years old	0.7%
Phase 4	Security personnel at low risk of exposure	500,000	Low risk	1.2%
	People working in professions at low risk of exposure[3]	1,000,000	< 40 years old	2.4%
		12,550,000	TOTAL	30%

[1] MOHE will categorize its staff into these three categories and that high risk will come in phase 1A, moderate in phase 1B, and low in phase 2.

[2] Security personnel are classified into three categories: i) high risk are those in direct contact with people (e.g. security of governmental facilities, at check points, traffic police); ii) intermediate risk (e.g. in barracks, working in groups); and iii) low risk, including administrative staff.

[3] Including employees of border points and train stations, educational staff, butchers, barbers, restaurants and bakeries workers, prisoners and State bodies staff.

Note: Total population in 2021 is estimated at 41,190,700 (Iraq Central Statistics Agency).

The project will play a critical role in enabling affordable and equitable access to COVID-19 vaccines in Iraq. Improved access to vaccination is needed to limit the spread of the disease and lessen the burden on the already weak health system. COVID-19 vaccination, along with improved diagnostics and therapeutics, is essential to protecting lives and enabling the country to reopen safely. The global economy will not recover fully until people feel they can live, socialize, work, and travel with confidence. Given the importance of limiting the spread of COVID-19 for both health and economic recovery, providing access to COVID-19 vaccines will be critical to accelerate economic and social recovery. The project activities will build on the ongoing World Bank's COVID-19 response and health sector support, as well as the support of other development partners (Box 1).

Box 1: Potential Supportive Roles for Partner Agencies in COVID-19 Vaccination in Iraq

WHO	Financing amount (if known)
• Providing technical support for vaccine introduction and deployment, including strategies, vaccine safety issues, development guidelines, conducting of training on Adverse Events Following Immunization (AEFI) surveillance for COVID-19 vaccine related issue and other issues of vaccine pharmacovigilance	N/A
UNICEF	**Financing amount (US$)**
• Supporting the development of a roadmap for integration of COVID-19 vaccine deployment with Expanded Program on Immunization (EPI) and other primary health care (PHC) services; quantification and forecasting of supply needs; cold chain assessment, procurement and maintenance • Acting as the procurement agent for the COVID 19 vaccine through the COVAX facility and facilitating the procurement and delivery of vaccines • Supporting the communication strategy and community engagement • Supporting the establishment of a robust information system for data management, monitoring and reporting, etc.	$1,000,000 (for procurement and to fund various PHC services and supplies; cold chain; training of personnel etc.) $150,000 (communications) $100,000 (Management Information System (MIS))

1.2 Project Development Objectives

***Project Development Objective (PDO) statement*:** The development objective is to support the Government of Iraq in the acquisition and deployment of COVID-19 vaccines.

PDO level indicator:

- Percentage of specific priority populations fully vaccinated (total and disaggregated by sex)
- Percentage of COVID-19 vaccination sites with adequate health care waste management for vaccination.
- Number of COVID-19 vaccine doses acquired through World Bank financing.

1.3 The Environment and Social Management Framework

The World Bank requires the Borrower to develop an Environment and Social Management Framework (ESMF) that will guide the Project Management Unit (PMU) during implementation. This ESMF consists of a rapid E&S assessment to assess the environmental and social aspects of the ongoing vaccine deployment by the government and to identify any potential gaps and propose mitigation measures to be incorporated into project activities .

2 Project Description

2.1 Project Components

The project consists of the following two components and subcomponents:

Component 1: COVID-19 Vaccines and Deployment (US$97 million IBRD). The component will support the purchase of COVID-19 vaccines and related deployment activities.

Sub-component 1.1: COVID-19 Vaccine Support **(US$72 million IBRD).** This subcomponent will support the purchase of approximately 6 million doses of the COVID-19 vaccines that meet the World Bank's VAC. This is expected to cover 3 million individuals or approximately 7 percent of the population in Iraq. Given the recent emergence of COVID-19, there is no conclusive data available on the duration of immunity that vaccines will provide. While some evidence suggests that an enduring response will occur, this will not be known with certainty until clinical trials follow participants for several years. As such, the financing will allow for re-vaccination efforts if they are warranted by peer-reviewed scientific knowledge at the time. In the case that re-vaccination is required, limited priority populations (such as health workers and the elderly) will need to be targeted for re-vaccination given constraints on vaccine production capacity and equity considerations (i.e., tradeoffs between broader population coverage and re-vaccination).

Sub-component 1.2: Support for Deployment of COVID-19 Vaccines **(US$25 million IBRD).** This sub-component will support system strengthening to successfully deliver COVID-19 vaccines at scale. This will include, inter alia, (i) procurement of equipment for health care waste management (minor electrical wiring might be required) , (ii) support for refining the electronic registration system for vaccination, (iii) vaccine logistics and supply chain management; (iv) communication initiatives to address vaccine hesitancy, (v) monitoring and management of adverse effects following immunization (AEFI) , and (vi) technical assistance associated with vaccine rollout. The project will prioritize supporting Iraq to address

the key gaps identified by the readiness assessment, in close coordination with WHO, UNICEF and other development partners. Given the uncertainties surrounding COVID-19 vaccination, the activities will be updated throughout project implementation through time-bound work plans agreed with the MOHE. Collaboration is envisioned with other World Bank Global Practices in defining, to the extent possible, sustainable and high-efficient energy solutions to improve the deployment of vaccines. Technical assistance can be provided to ensure that energy efficiency standards for upgraded cold chain are applied for COVID-19 vaccines and beyond, including through the development of micro-plans to integrate climate-related considerations (e.g. energy efficiency or promotion of hybrid energy source consumption for cold chain). The project will also support the procurement of effective and low-emissions health care waste management equipment that will also contribute to improving the resilience of health care waste management systems to extreme precipitation. In addition, the financing will support the implementation of the COVID-19 communication action plan by the MOHE and hired firms. Communication campaigns will be tailored where necessary for specific groups (e.g. women in rural groups, IDPs) and include information on procedures/plans in case of extreme weather or other climate-change-induced events.

Component 2: Project Management and Monitoring and Evaluation (M&E) (US$3 million IBRD and Trust Fund). This component will support the coordination, implementation, and management of project activities, including third party monitoring.

Sub-component 2.1. Project Management and M&E (US$1 million IBRD) will support the coordination, implementation, and management of project activities, including through: (i) the carrying out of technical audits as needed, to verify deployment of COVID-19 vaccines and installation, functionality, and use of equipment and supplies acquired under the project; (ii) development of a system for project monitoring and evaluation; and (iii) provision of relevant technical assistance to support the MOHE in the implementation, management, monitoring and evaluation of the project, including provision of operating costs and ensuring compliance with the Environmental and Social Commitment Plan (ESCP), the Environmental and Social Management Framework (ESMF), and the Stakeholder Engagement Plan (SEP). This component will monitor COVID-19 vaccines deployment and therefore improve data collection, analysis, reporting and use of data for action and decision-making. Climate and Gender specific activities supported by the project will also be monitored.

Sub-component 2.2. Third Party Monitoring (US$ 2 million Trust Fund). A third-party monitoring agency (TPMA) will be contracted by the MOHE using grant financing from I3RF. The TPMA will be responsible for monitoring compliance of the vaccination efforts with Iraq's NDVP and WHO standards. The GOI will prepare a detailed terms of reference (TOR) that is subject to World Bank technical approval, defining the specific roles and responsibilities of the TPMA. The TPMA role can be filled by a United Nations (UN) agency (or agencies), international or local non-governmental organizations (NGO), or consulting firms that meet the criteria agreed upon between the World Bank and MOHE.

2.2 Environmental and Social Risk Classification (ESRC)

2.2.1 Environmental Risk Rating

The Project will have long term positive environmental, social, and health impacts, as it should strengthen the public health system overall and specifically improving COVID-19 surveillance, monitoring, prevention and containment. In the short-term, the environmental risks are considered to be Substantial. The COVID-19 vaccination rollout poses many uncertainties, such as those related to the management of impacts and risks of vaccine wastes, cold chain process, energy consumption, etc., that may require ad hoc decisions and adjustments. The main environmental risks identified at this stage are: (i) the Occupational Health and Safety issues related to testing and handling of supplies during vaccination; (ii) the logistical challenges in transporting vaccines across the country in a timely manner, adhering to the recommended temperature and transportation requirements; (iii) generation and management of medical healthcare waste; (iv) community health and safety issues related to unforeseen effects of vaccination, traffic/road safety risks associated with transporting vaccines as well as with handling, transportation, disposal of hazardous and infectious healthcare waste and further spread of COVID-19 during the vaccination process due to gatherings and close proximity; and (v) increase of water and energy use. Vaccination residue waste can have a substantial impact on the environment and human health, and these wastes could include used needles, syringes, cotton swabs, personal protective equipment (PPE), and the poor track record of medical waste management and poor capacity[7].

2.2.2 Social Risk Rating

The social risks associated with this project are rated as 'substantial'. The anticipated risks include: (i) inequitable access for marginalized and vulnerable social groups including disabled, elderly, internally displaced populations (IDPs) and refugees to access vaccines, (ii) social conflict, and risks to human security resulting from limited availability of vaccines and social tensions related to the challenges of a pandemic situation; (iii) Gender inequalities and social norms to access critical health services such as vaccinations; (iv) Sexual Exploitation and Abuse/ Sexual Harassment (SEA/SH) risks among patients and health care providers, especially in relation to distribution of lifesaving vaccines; (v) inappropriate data protection measures and insufficient/not effective stakeholder communication on the vaccine roll-out strategy; (vi) risks associated with adverse events following immunization, (vii) the risk of elite capture and/or corruption as the COVID-19 vaccine will be in short supply relative to the demand; and (viii) the potential social risks due to military presence even though the military is only going to be used for transporting and not vaccine deployment[8].

[7] Appraisal Environmental and Social Review Summary for Iraq COVID-19 Vaccination project P177038
[8] Appraisal Environmental and Social Review Summary for Iraq COVID-19 Vaccination project P177038

3 Policy, Legal and Regulatory Framework

3.1 National Legislations and Regulations

The project is subject to the following Iraqi laws and regulations:

- **Law no. 27 of 2009 on the Protection and Improvement of the Environment**

  The law aims at protecting and improving the environment through elimination and treatment of existing damages or damages likely to be caused. It also aims at preserving public health, natural resources, biodiversity as well as natural and cultural heritage; in coordination with the relevant authorities in a manner that ensures sustainable development through International and Regional cooperation in this regard. This law addresses the following major points:

  - The establishment of the Environmental Protection Council/Office which will oversee the implementation of environmental protection across the country
  - The environmental protection provisions such as importance of conducting Environmental Impact Assessment for projects that may impact the environment;

    The water protection from contamination, air quality protection and control of noise emissions, land protection, ecological protection and hazardous waste management.

- **Regulations no. 2 of 2001 on Preservation of Water Resources**

  As mentioned in article 8 of this regulation, it is prohibited to discharge or throw any kind or any amount of waste from the location to the common water of any kind or quantity, or whether the discharge was regular, irregular or temporary, for any reason, unless granted permission from the office of protecting and improving Environment or whom it shall authorize.

- **Instructions No. 1 of 2015: Management of Health Facilities Waste**

  These instructions define the health institutions, non-hazard medical waste, Hazard medical waste, infectious waste, chemical waste, pressurized gases cylinders waste, and other hazardous waste. These instructions also outline the integrated methodology and requirements to handle the medical wastes.

- **Article No.15 from Instruction No.3 of 2011: Locations of hazardous waste disposal sites**

  This article provides the specifications of the hazardous waste duping site, location constraint, technical requirements, ground water level, lining requirements, and others.

  The above-mentioned laws and instructions are relevant to the project since it is expected to increase biomedical waste generation which if not properly managed would lead to the contamination of the environment and water resources.

- **Law No. 37 of 2015 Iraqi Labor Law**

  Aims to regulate the work relationship between the workers and employers and their associations, in order to protect their rights and achieve sustainable development based on social justice and equity and secure decent work for all. The Social Law (**Law No. 39/1971**) contains

further provisions relevant to the employer employee relationship. The law distinguishes foreign workers from Iraqi workers, but all workers must be fully documented in order to legally work in Iraq. The Iraqi Labor Law does not distinguish between employees and contractors. The law applies to all 'workers', which is anyone working under the supervision of an employer in return for a wage. The law does distinguish between permanent work and work for a defined period, but there are certain requirements that must be met under the law in order to ensure that a contract for a determined period does not convert to a permanent contract. Article 6, chapter 3 of Iraqi Labor Law, states that the minimum age for employment is 15 years old. However, Iraq is also signatory to the 1989 International Convention on the Rights of the Child, which defines everyone under the age of 18 as a child who must have special protection and care. This Law establishes the duties and responsibilities of employer's regarding occupational health and safety, the functions of safety commissions at places of work, and regulates the responsibilities and duties of workers with respect to occupational health and safety.

- **Instruction no. 12 of 2016: Occupational Health and Safety**

  The instructions call for the enforcement of occupational health and safety provisions at places of work and establish the functions and duties of employers and employees with regard to occupational health and safety. They regulate that all workplaces are to appoint a person in charge of occupational safety and an occupational safety committee. They also call for the appointment of a person that shall be responsible for occupational safety and for appointment of an occupational safety committee at each workplace. These instructions establish the functions and duties of employers and employees with regard to occupational safety.

- **Law No. 6 of 1988 concerning the National Commission for Occupational Hygiene and Safety governs the enforcement of occupational health and safety regulations.**

COVID-19 vaccination is a process that entails health and safety risks for staff in charge of it in medical facilities. The above laws are relevant to the project as the Iraqi Labor Law governs the employer employee relationship and the laws and instructions on H&S set a regulatory framework for managing one of the most important impact of the project.

3.2 Conventions and Treaties signed and ratified by Iraq

- UN Convention for Biological Diversity (UNCBD) acceded 2008;
- UN Convention to Combat Desertification (UNCCD) signature 2010;
- RAMSAR Convention on Wetlands acceded signed 2008;
- United Nations Framework Convention on Climate Change (UNFCCC) signed2009
- Kyoto Protocol signed 2009
- Basel Convention on the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal acceded 2011
- Core Conventions of the ILO: C29 (Forced Labour) (ratified 1962), C98 (Right to Organize and Collective Bargaining) (ratified 1962), C100 (Equal Remuneration) (ratified 1963), C111

(Discrimination, Employment and Occupation) (ratified 1959), C138 (Minimum Age Convention) (ratified 1985), C182 (Elimination of the Worst forms of Child Labour) (ratified 2001).

- Stockholm Convention of persistent organic pollutants
- Minamata Convention on Mercury
- Rotterdam Convention for prior informed consent.
- Vienna Convention for the Protection of the Ozone Layer

The above conventions regulate the protection of the environment, water resources and the employee-employer relationship and thus are relevant to the project.

3.3 World Bank Environment and Social Framework

The Environmental and Social Framework (ESF) enables the World Bank and Borrowers to better manage environmental and social risks of projects and to improve development outcomes. The ESF offers broad and systematic coverage of environmental and social risks. It makes important advances in areas such as transparency, non-discrimination, public participation, and accountability—including expanded roles for grievance mechanisms. It brings the World Bank's environmental and social protection into closer harmony with those of other development institutions.

The ESF consists of:

- The World Bank's Vision for Sustainable Development
- The World Bank's Environmental and Social Policy for Investment Project Financing (IPF), which sets out the requirements that apply to the Bank
- The 10 Environmental and Social Standards (ESS), which set out the requirements that apply to Borrowers
- Bank Directive: Environmental and Social Directive for Investment Project Financing
- Bank Directive on Addressing Risks and Impacts on Disadvantaged or Vulnerable Individuals or Groups

The following Environmental and Social Standards (ESS) are applicable to the Project:

ESS1 Assessment and Management of Environmental and Social Risks and Impacts

This standard is relevant. The Project is expected to produce positive environmental and social impacts as it seeks to support the GOI in the rollout of COVID-19 vaccines in line with the NDVP. However, project activities also present significant environmental, social, health and safety risks for the project workforce and communities. Given the nature of how the disease spreads, the medical requirements and resources needed to address the issue, health-care workers, community members, beneficiaries of the Project, and the environment are likely to be exposed to risks from medical wastes generated from the vaccination sites (if not properly treated and managed) and the interaction among the potential COVID-19 cases and general public increasing the risk of further spread of COVID-19. To manage these risks, MOHE prepared the following instruments: The Environmental and Social Management Framework (ESMF) which includes procedures relevant to the management of the subcomponents including the screening and assessment of associated environmental and social risks and impacts and identification of pertinent measures and plans.

Mitigation measures will be mainly based on relevant WHO guidance, World Bank Group Environment, Health and Safety (EHS) Guidelines and other Good International Industry Practices (GIIP). The ESMF includes measures for screening for infection prevention and healthcare waste management; traffic and road safety management, Labor Management Procedures (LMP) as part of ESMF for PMU and the engaged workforce to ensure proper working conditions and management of worker relationships; occupational health and safety and COVID-19 specific risks and impacts and related mitigation measures; including guidelines for establishing and managing an accessible multichannel grievance mechanism establishment; and capacity strengthening for social, environment, health and safety management. To address SEA/SH, the project will elaborate an SEA/SH Prevention and Response Action Plan annexed to the ESMF (including a mapping of existing service providers).

The ESMF assesses the risks and impacts of engagement of the security forces and implement measures to manage such risks and impacts.

Medical wastes need to be treated as per accepted standards for which an Infection Control and Waste Management Plan (ICWMP) is a part of the ESMF. Workers in healthcare facilities are particularly vulnerable to contagions like COVID-19. Healthcare-associated infections due to inadequate adherence to occupational health and safety standards can lead to illness and death among health and laboratory workers. The ICWMP contains detailed procedures, based on WHO guidance, for protocols necessary for testing, administering vaccines and handling medical waste as well as environmental health and safety guidelines for staff, including the necessary personal protective equipment (PPE) and vaccinating of health staff as per the priority list stipulated in the PAD and the NVDP. Proper disposal of sharps, disinfectant protocols, and regular testing of healthcare workers are included. All project activities ranging from the deployment of vaccine to community engagement activities present a risk of transmission in the community. The operation of health facilities has a high potential of carrying micro-organisms that can infect the community at large if they are not properly managed and controlled. The Project's ESMF outlines procedures for each project activity commensurate to the risk. The Project is not expected to fund any civil works because the facilities to accommodate vaccines and associated supplies are already in place.

The ESMF was prepared to a standard acceptable to the World Bank and disclosed on the MOHE website and on the World Bank websites prior to project negotiations. The ESMF will be updated based on the findings of the rapid E&S assessment.

The disclosure of the ESMF was deferred to the negotiation stage to ensure the MOHE has sufficient time to prepare the ICMWMP, LMP, and GBV Action Plan, including the organization of virtual consultation session with different stakeholders (e.g. environmental directorates in governorates, health directorates in governorates, NGOs, CSOs, academics, research centers, etc.). In addition, the MOHE is gathering the required information/data/ methodologies that are used in different health institutions to handle medical waste.

According to ESS1, the Borrower will engage with stakeholders as an integral part of the Project's environmental and social assessment and project design and stakeholder engagement will continue

through implementation. Preliminary design stage stakeholder activities conducted by the client have involved participation from both government and non-government players and are set out in the Stakeholder Engagement Plan (SEP). The SEP, which includes grievance mechanism, focuses on establishing a structured approach for community outreach and two-way engagement with stakeholders with emphasis on vulnerable and disadvantaged groups.

The project is not expected to impact natural habitats or cultural sites. There is no land acquisition or involuntary resettlement envisaged under the project. However, other social dimensions including risks of exclusion, unequal access to vaccination programs for most vulnerable and disadvantaged groups, and gender aspects will need to be further analyzed and incorporated into project design and implementation. The vaccines financed under the project will be prioritized for groups most at risk as defined in the NDVP. This will be supported by awareness raising campaigns targeting the priority groups and encouraging them to register for vaccination. The NVDP covers the vaccination of seven categories of prioritized populations, regardless of their citizenship status. The WHO SAGE Allocation Framework was used to determine the prioritization of populations in the early phases and was modified based on Iraq's context. Efforts are being made by the GOI to ensure equitable access to vaccines for people with disabilities and other vulnerable groups. To ensure universal access, staff at vaccination centers will also be able to register on behalf of the recipient. Individuals can also register directly at the vaccination sites. Due to the low uptake of vaccines, GOI expanded the vaccination eligibility to the entire adult population, while continuing to prioritize health workers and those above the age of 60 years, as such, the vaccination is currently open to all individuals ages 18 or older residing in Iraq. Initial stakeholder activities conducted during the project preparation with both government and non-government stakeholders and other interested parties have identified primary stakeholders and formed a comprehensive baseline for the SEP that will guide all outreach and communication activities to target beneficiary groups.

The Environmental and Social Specialists within the PMU will monitor all the vaccination rollout activities to manage risks and impacts that might result from these activities and coordinate with the counterparts in the local governorate to implement the mitigation measures that are proportionate to the level of environment, health/safety and social risks.

Training shall be required for the PMU staff, on specific aspects of environmental & social risk management, stakeholder engagement, occupational health & safety (OHS), fair, equitable and inclusive access and allocation of project benefits including with regards to vaccines. The trainings shall be organized observing the COVID-19 preventive measures as recommended by the MOHE, the guidance by WHO and any other good international practices.

ESS2 Labor and Working Conditions

This standard is relevant. The project workforce is expected to include i) direct workers (staff of the department of health and family welfare, the institutes, hospitals, healthcare facilities and education/training institutes who will be working at the PMU or in other capacities as full time staff assigned to the project) , ii) contracted workers employed or engaged through third parties such as workers engaged for medical waste management, vaccinators, transportation of vaccines, managing digital platform, communication/outreach programs, TPM agent, etc. and iii) primary supply workers: such as suppliers of vaccines and other medical equipment and accessories like cottons, sterilizers, etc.

Government civil servants will be engaged to work in connection with the project, however, they will remain subject to their existing public sector employment agreement and arrangement expanded with the protection of workforce and OHS requirements of ESS2. Project workers are at higher risk of psychological distress, fatigue and stigma due to the nature of their work. The project will include appropriate OHS measures, including those outlined in WHO guidelines which is set in the ESMF. This encompasses procedures for entry into health care facilities, including minimizing visitors, undergoing stringent protocols for admittance and release of patients, ensuring adequate PPE supply in line with general EHS Guidelines and building upon experience gained over time.

To manage risks related to project workers, a Labor Management Procedures (LMP) is part of ESMF which (i) responds to the specific health and safety issues posed by COVID-19, and (ii) protect workers' rights as set out in ESS2. The terms and conditions of the contracts of all the workers involved in the project need to be made in accordance with the national labor law and meet the requirements described in ESS2 to ensure that working conditions will be acceptable. The LMP will include the terms and conditions of employment, non-discrimination and equal opportunities, workers' organizations, measures to prohibit child labor and forced labor, grievance redress mechanisms for labor disputes, and occupational safety and health measures for the workers, including compliance with the provision of an adequate and culturally appropriate Labor Grievance Mechanism.

Furthermore, Health and Safety management plans are included in the ESMF and incorporated the WHO guidance for COVID-19 preparedness, disease-spread prevention and healthcare facility management along with the information, procedures and tools required to work safely and effectively.

ESS3 Resource Efficiency and Pollution Prevention and Management

This standard is relevant. Pollution prevention and management specifically medical waste management will be of particular importance under the Project. Medical waste generated from vaccination centers to be supported by the project will likely include contaminated wastes and infected materials (e.g. sterilizing solutions and reagents, vaccines, syringes, sharps, PPE equipment, etc.) that would require special handling and disposal, as they may pose risks to healthcare workers in contact with these wastes including those of the waste disposal municipalities. Informal disposal may lead to contamination of soil and groundwater, and more importantly, to further spreading of the virus and other health risks to nearby

communities. Iraq generally lacks adequate solid waste disposal infrastructure and has few facilities for permanent disposal of medical waste. While on-site separation and collection of medical waste is mostly well-organized, its final disposal is a challenge, especially in rural areas. In order to mitigate the risks associated with on-site management of medical waste, its transportation and disposal, the project will invest in the purchase of medical equipment to neutralize COVID-19 associated waste, including autoclaves and shredders, puncture resistant safety boxes (sharps containers) for disposal of syringes, needles and other contaminated sharps. Furthermore, the ESMF includes an ICWMP, which comprises specific requirements for waste management practices employed under the project for the supported health facilities. The ICWMP is aligned with the content of the infection control and waste management plan (ICWMP) template included in the COVID 19 ESMF template, following WBG **EHS Guidelines** for Healthcare Facilities and pertaining GIIP. The ICWMP covers but not limited to the following: (a) anticipated waste composition and quantity; (b) existing medical waste management system, including deviation and gaps from the relevant Environmental Health and Safety Guidelines (EHSGs), GIIP, WHO guidelines and other protocols; (c) existing regulatory framework and supervision / monitoring arrangements; (d) plan for using the existing medical, solid and liquid waste management system including any measures to upgrade or remedy identified gaps and deviations; and (e) additional arrangements for supervision and monitoring of waste management. The PMU will ensure the execution of the ICWMP throughout the project implementation period. Furthermore, the cold chain requires refrigeration facilities for maintaining product validity along every step from production to final consumption (storage, transport, processing and distribution). This will increase energy and water consumption and carbon emission due to the use of refrigeration. The use of cold chain process is assessed in the ESMF as well and measures to reduce the energy and water consumption including access to renewable energy sources where resources and context allows will be explored.

Vaccines have different storage temperature requirements, ranging from temperatures as low as -70 ^{o}C to refrigerator temperatures of 2-8 ^{o}C. The NDVP provides general guidance applicable for all participating entities and institutes, starting from the moment vaccines arrive at Baghdad International Airport (Baghdad) to the storage, distribution and vaccination sites. Specifically, it describes good storage practice, stock management, good distribution practice, and waste management. Particularly, high-efficiency cold chain with sufficient storage capacity will be available according to the appropriate temperature for each COVID-19 vaccine, such as +2-+8 °C, -20 °C, or -40 to -80 °C. The PMU and TPMA will monitor and assess the cold chain equipment/process on a regular basis. The MOHE has already conducted training for managers in all health departments, cold chain officials, and health workers at the designated vaccination sites with WHO and UNICEF support in GIIP. The GOI has secured and distributed the required Ultra Low Temperature (ULT) freezers to the designated sites for Pfizer vaccine..

ESS4 Community Health and Safety

The expected project beneficiaries will be at least 7 percent of Iraq's population, as well as the population at large given the nature of the disease. The Project will contribute to ensure sufficient supply of vaccines, transportation and utilization logistics.

Protecting the health of communities from infection from COVID-19 is a central part of the project. Without adequate controls and procedures, project activities have the potential to contribute to the spread of the virus and may also contribute to social conflict. Medical wastes and general waste from the vaccinated centers have a high potential of being contaminated with the coronavirus or other pathogens that can infect the healthcare workers and community at large if they are not properly managed. The improper storage, transport, use and disposal of vaccines could also pose health and safety risks if not adequately managed. The ESMF describes emergency preparedness and response (EPR) measures for possible accidents and emergencies and also measures for safe cold chain temperature monitoring power outages and natural disasters. The Project's ESMF and the Infection Control and Waste Management Plan (ICWPM) outline procedures for project activities commensurate to the risk including (i) how project activities will be carried out in a safe manner with (low) incidences of accidents and incidents in line with GIIP (WHO guidelines); (ii) measures in place to prevent or minimize the spread of infectious diseases; (iii) emergency preparedness measures.

In line with the World Bank SEA/SH Good Practice Note, the Bank has undertaken a SEA/SH risk screening of potential risks and impacts induced by the project, and the risk has been classified as low, however, a GBV Action Plan was prepared (Ref. to Annex III).

According to confirmation of MOHE, no forced vaccination will be followed. Article 31 of the Iraqi constitution guarantees that every Iraqi has the right to health care, and the state is concerned with public health and guarantees the means of prevention and treatment without any force majeure. Mitigation measures like voluntary registration system, training of vaccinators, awareness raising of beneficiaries will be implemented to prevent any forced vaccination.

The security forces accompany the cold trucks to secure transportation of the vaccine shipments from the airport to the place of destination and are present outside vaccination sites to provide protection. The security forces accompanying the cold trucks are the Iraqi army, reporting to the Joint Operations Command through the Ministry of Defense. Security forces for facility protection report to the Facilities Protection Directorate of the Ministry of Interior. The risks related to use of security forces is assessed in the ESMF under Annex IV.

Given the scale of the vaccination program, there is a risk for possible adverse side effects following immunization (AEFI). The MOHE has a digital platform and an enhanced capacity developed by the MOHE that builds upon the existing pharmaco-vigilance system that regularly monitors and tracks side-effects of all medications following WHO recommendations.

The national code of construction in Iraq follows the ACI 318 codes which is the legal document that provides a minimum level of safety and health for the constructions. All Iraqi constructions follow this code to provide safety against collapse, fire, damage, etc. To the extent possible, the MOHE will select health facilities that accommodate all safety measures, including the presence of fire alarm and firefighting systems, such as water sprinklers according to WBG EHS and national guidelines. Lessons learned in the previous project (EODP), including fire safety incidents will be taken into consideration.

During supervision and site visits, the PMU and TPMA will check the availability of fire alarm and firefighting system and identify areas for improvement.

Efforts are being made by the government to ensure equitable access to vaccines for people with disabilities and other vulnerable groups. Iraq applied the WHO SAGE Allocation Framework for determining the priority groups for COVID-19 vaccination, and the prioritization was modified based on Iraq's context. According to the MOHE, vaccination facilities have the necessary supplies to vaccinate vulnerable groups, people with disabilities, and IDPs. Vaccination for this population group will be conducted under direct supervision of the health districts or the health directorate at the governorate level.

ESS10 Stakeholder Engagement and Information Disclosure

This standard is relevant. The project's SEP outlines a structured approach to engagement with stakeholders from different government and non-governmental agencies, vulnerable groups e.g. females, minority PMD, elderly and refugees, which is based upon meaningful consultation and disclosure of project information, considering the specific challenges associated with COVID-19. The SEP will be disclosed prior to project appraisal. The project recognizes the need of effective and inclusive engagement with all the relevant stakeholders but also the population at large. Considering the serious challenges associated with COVID-19, including the constantly fluid and rapidly changing pandemic situation, dissemination of clear messages around social distancing, and high-risk demographics are critical. The SEP focuses on:(i) stakeholder identification and analysis; (ii) designing and planning engagement modalities that serve as an effective communication tool for consultations and disclosure; (iii) outreach strategies for vulnerable groups; (iv) enabling platforms for influencing decisions; (v) defining roles and responsibilities of different actors in implementing the SEP; and (vi) a grievance mechanism (GM).

The SEP identifies key stakeholders (i.e. affected parties, other interested parties and disadvantaged and vulnerable groups) and describes the process and modalities for sharing information on the project activities, incorporating stakeholder feedback into the project and reporting and disclosure of project documents. The affected parties include: Direct beneficiaries, front line health workers and technicians in facilities, hospitals, laboratories, public/private health care workers (doctors, nurses, midwives, laboratory technicians, sanitary workers, operators of blood mobiles) and vulnerable groups in particular women, youth, elderly, persons with disabilities, displaced persons, those with underlying health issues, and the cultural sensitivities of diverse ethnic groups. Other interested parties such as media and non-governmental organizations, have also been mapped.

The SEP helps the existing communication platforms to reach a wider audience in a more nuanced and targeted way coupled with the digital platform for citizen engagement (CE) and feedback which is to be set-up as part of the project. The
Government's digital platform for CE will be strengthened through five channels: information sharing and disclosure, outreach and awareness building, assessing the needs and participatory planning, participatory management and implementation and participatory monitoring and oversight. The project

has carried out consultation on June 24th 2021 during the preparation phase, which identified inputs that will inform the design and implementation of the project. In addition to government and non-government entities, these consultations included vulnerable groups to better understand their concerns/needs in terms of accessing information, medical facilities and services and other challenges they face at home, at workplaces and in their communities. Specific attention was given to the vaccine roll-out strategy, outreach modalities and communication, mobilization, and community engagement channels. The results of consultations with the above key stakeholders have been incorporated into the ESMF. Some of the strategies that will be adopted to effectively engage with and communicate to vulnerable groups are detailed in the SEP and include (a) ensuring community engagement teams are gender-balanced; (b) considering provisions for childcare, transport, and safety for women; (c) targeting messages to areas where vulnerable groups including refugees and IDP live to inform them about safety measures and benefits; (d) tailoring messages to the elderly and those with medical risks including their target family members and health care providers; and (e) providing information for disabled people in accessible formats, like braille, large print; text captioning; videos etc. Communication strategies have already been put in place targeting the vulnerable groups to understand their concerns and needs in terms of accessing information, medical facilities and services and other challenges they might face in their working or home environment.

The client has developed and put in place a GM system. A dedicated hotline (07901939809 and 07726180982) and an email address (dep.ci2017@gmail.com) have been established for grievances and feedback and it will be tailored to meet the project standards and to enable stakeholders to air their concerns, comments, and suggestions. This will be managed by the PMU, and information on access channels will be delivered as part of the SEP and communication outreach to all potential project beneficiaries. Moreover, the MoHE PMU has assigned a communication specialist and a dedicated GM officer to closely monitor the implementation of the environmental and social mitigation measures as per the relevant E&S instruments and will also ensure adequate implementation of the GM dedicated to the vaccination deployment. All staff and operators who will be handling the GM will receive the necessary training for effective handling of complaints including on any potential social related complaints, complaints from the elderly or other vulnerable groups.

The final SEP (including the GM) will be shared with relevant stakeholders via culturally appropriate means (and having regard to language, logistical and technological constraints).

3.4 The World Bank Group Environmental Health and Safety (EHS) Guidelines

The applicable EHS guidelines are the following:

- EHS Section 1.5 – Hazardous Materials Management;
- EHS Section 2.5 – Biological Hazards;
- EHS Section 2.7 – Personal Protective Equipment (PPE);
- EHS Section 2.8 – Special Hazard Environments
- EHS Section 3.5 – Transport of Hazardous Materials; and
- EHS Section 3.6 – Disease Prevention.
- EHS Section 4.2 – Occupational Health and Safety

- EHS Section 4.3 – Community Health and Safety

The EHS for Health Care Facilities (HCF) also apply to the project. The EHS Guidelines for Health Care Facilities include information relevant to the management of EHS issues associated with HCFs 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.

3.5 Additional Guidelines

World Bank Technical Note on Public Consultations and Stakeholder Engagement. Due to COVID-19 imposed restrictions on physical contact, the Bank has prepared a Technical Note on Public Consultations and Stakeholder Engagement in World Bank supported operations. This technical note will be taken into consideration when implementing the SEP.

World Health Organization (WHO) Guidance. The WHO has created a web-based platform for guidance on issues related to COVID-19. These technical guidance documents are evolving, and they are being updated regularly as new information becomes available and cover the following topics:

(i) infection prevention and control, (ii) rights, roles and responsibilities of health workers, including key considerations for occupational safety and health, (iii) water, sanitation, hygiene and waste management, (iv) safe management of waste from health care faculties (v) rational use of PPE, (vi) vaccine readiness assessment, (vii) surveillance of adverse events following immunization[9].

World Bank Technical Note: Use of Military Forces to Assist in Covid-19 Operations Suggestions on How to Mitigate Risks. The military will ensure proper transport of vaccines but not deployment of vaccines through the protection of vaccine transport convoys and the security of vaccination centers and storage facilities**.** This guidance note details the advantage using the military in the vaccination process and aims to present ways to prevent ensuing risks Refer to Annex VII.

[9] https://www.who.int/vaccine_safety/publications/aefi_surveillance/en/

4 Environmental and Social Baselines

4.1 Environmental Baseline

This section provides an overview of the environmental conditions in Iraq and of relevance to the project. The climate conditions affect the use of vaccines due to their sensitivity to nature. Water (surface and ground), biodiversity and natural resources need to be protected from pollution that might be caused by the disposal of hazardous medical waste. The deployment of vaccines will increase waste generation and climate change affecting emissions due to transport of vaccines and increased used of power for Ultra-Low Temperature (ULT) freezers.

4.1.1 Climate[10]

Iraq lies within the moderate northern region, system similar to that of Mediterranean where rainfall occurs almost in winter, autumn, spring and disappear in summer. climate is continental and subtropical, the climate can be categorized into three kinds:

4.1.1.1 Mediterranean Climate

It covers the mountainous region at the north-eastern which is characterized by cool winter where snow falls at the top of mountains and rainfall ranges between (400-1000 mm) annually. Its summer is moderate and the temperature does not exceed (35 º C) in most of its part, therefore, it is well known for its summer resorts such as Salah Al -deen, Shaqlawa, Haj-umran, Sarsang and others.

4.1.1.2 Steppes Climate

It is a transitional climate between the mountainous region in the north and the hot desert in the south. This climate prevails in the terrain area with annual rainfall ranges between (200 - 400 mm) which is sufficient for seasonal pastures.

4.1.1.3 Hot Desert Climate

It prevails the sedimentary plain and western Plateau which cover (70%) of Iraq's area and characterized by great temperature variation between day and night, summer and winter. Annual rainfall ranges between (50 - 200 mm). The maximum of which reaches (45 - 50ºC). in winter warm weather prevails, temperature remains above frost and does not fail below it except for few nights.

North - western winds prevail in Iraq during all seasons of the year it is cool and dry in winter, accompanied by clear sky, whereas, in summer the wind moderates the weather and decreases high temperatures. Eastern or north-eastern winds blow in winter, accompanied by severe cold and clear sky. South-Eastern winds, are relatively warm and humid causing, sometimes, clouds and rains.

[10] Updated document about physical features of Iraq 2018-2019 (geography, climate, ...etc), published on CSO/ MoP website (English and Arabic). (http://cosit.gov.iq/documents/AAS2020/1.pdf).

4.1.2 Rainfall

Rainfall in the mountains is more abundant and may reach 1,000 millimeters a year in some places, but the terrain precludes extensive cultivation. Cultivation on non-irrigated land is limited essentially to the mountain valleys, foothills, and steppes, which have 300 millimeters or more of rainfall annually. Even in this zone, however, only one crop a year can be grown, and shortages of rain have often led to crop failures.

4.1.3 Temperature

Mean minimum temperatures in the winter range from near freezing (just before dawn) in the northern and northeastern foothills and the western desert to 2 to 3 °C (35.6 to 37.4 °F) and 4 to 5 °C (39.2 to 41.0 °F) in the alluvial plains of southern Iraq. They rise to a mean maximum of about 16 °C (60.8 °F) in the western desert and the northeast, and 17 °C (62.6 °F) in the south. In the summer mean minimum temperatures range from about 27 to 31 °C (80.6 to 87.8 °F) and rise to maxima between roughly 41 and 45 °C (105.8 and 113.0 °F). Temperatures sometimes fall below freezing and have fallen as low as −14 °C (6.8 °F) at Ar Rutbah in the western desert.

4.1.4 Wind

The summer months are marked by two kinds of wind phenomena. The southern and southeasterly “sharqi”, a dry, dusty wind with occasional gusts of 80 kilometers per hour, occurs from April to early June and again from late September through November. It may last for a day at the beginning and end of the season but for several days at other times. This wind is often accompanied by violent dust-storms that may rise to heights of several thousand meters and close airports for brief periods. From mid-June to mid-September the prevailing wind, called the shamal, is from the north and northwest. It is a steady, very dry wind, absent only occasionally during this period.

4.2 Geographical features[11]

4.2.1 The alluvial Plain

It forms quarter of Iraq's area, i.e. (132500) sq. km². extended in a form of rectangle (650km. Long and 250 km. wide) between Balad, on the Tigris river and Ramadi , in the Tal Al -Aswad region on the Euphrates river in the north, Iranian border on the east and the desert plateau on the west including the marsh and lakes area.

[11] Updated document about physical features of Iraq 2018-2019 (geography, climate, ...etc), published on CSO/ MoP website (English and Arabic). (http://cosit.gov.iq/documents/AAS2020/1.pdf).

4.2.2 The Desert Plateau

It is located in the west of Iraq and forms about less than a half of the country's area or (168552) sq. km². and its altitude about (100-1000) m, it includes Aljazira area.

4.2.3 The Mountainous Region

This region is located in the north and north- east of Iraq and extend to Iraq's joint boundaries with Syria, Turkey and Iran in the west, north and east, this region forms one quarter of Iraq's area, about (92000) sq. km.

4.2.4 The Terrain Region:

It is a transitional region between lowlands in the south and high mountains region, in the north and north-east, it forms (50%) of the mountainous region or (67000 sq.km.). (24000 sq.km.) outside the mountainous region with an altitude of (100-200) m, and (25000 sq.km.) inside the mountainous region with an altitude of (200-450) m.

4.3 Water Resources[12]

4.3.1 Surface Water Resources

Iraq is traversed by two major rivers, the Tigris and the Euphrates, both of which rise in the eastern mountains of Turkey and enter Iraq along its northwestern borders. Before their confluence just north of Basra, the Euphrates flows for about 2980 km and the Tigris for some 1851 km within Iraqi territory. Downstream from this point, the combined rivers form the tidal Shatt al-Arab waterway, which flows 190 km into the Gulf. The southern Shatt al-Arab forms the border between Iraq and Iran.

The Euphrates basin (878,390 km^2) embraces parts of Iraq (roughly 31.7% of the basin), Turkey (13.9%), Syria (13%) and Saudi Arabia (41.4%)The Euphrates River does not receive water from permanent tributaries within Iraqi territory and is fed only by seasonal runoff from wadis.

The Tigris basin (371737 km^2) covers parts of the territories of Iran (44.3% of the basin), Iraq (43.4%), Turkey (12.1%) and Syria (0.2%). Within Iraq, the Tigris River receives water from four main tributaries, the Khabour, Great Zab, Little Zab and Diyala, which rise in the mountains of eastern Turkey and northwestern Iran and flow in a southwesterly direction until they meet the Tigris. A river, Al Authaim, rising in the highlands of northern Iraq, also flows into the Tigris, and is the only significant tributary entirely within Iraq.

The great alluvial plains of the Tigris and Euphrates Rivers comprise more than a quarter of Iraq's surface area. Topographically, the region is extremely flat, with a fall of only 4 cm/km over the Euphrates and 8 cm/km along the Tigris. Under natural conditions, the region was rich in wetlands and subject to annual flooding of up to 3m. In recent years, this seasonal flooding has occurred on a much smaller scale because

[12] updated report of water resources issued in 2020, published on CSO/ MoP website (inArabic). http://cosit.gov.iq/documents/agriculture/agre_anim/full%20reports/%D8%AA%D9%82%D8%B1%D9%8A%D8%B1%20%D8%A7%D9%84%D9%85%D9%88%D8%A7%D8%B1%D8%AF%20%D8%A7%D9%84%D9%85%D8%A7%D8%A6%D9%8A%D8%A9%202020.pdf

of dams constructed upstream, particularly on the Euphrates in Turkey and Syria, and due to large scale drainage works in Iraq itself.

The major river flow annual cycle can be divided into three periods:

a. spring flood period, February to June
b. summer low flow period, July to October
c. autumn - winter rainfall period, November to February

During spring flood period, Tigris River conveys about 75 % of the annual flow, during low flood period 10 % and 15 % during autumn period. The volume and duration of floods on the Tigris depends greatly on flood flow of the tributaries. The spring flood of Diyala tributary occur before that on the Lesser Zab, while this event precedes the spring flood on Greater Zab, The Euphrates carries 70% of annual flow during spring period, 10% in the summer period, and 20% during autumn period.

The Euphrates peak flows usually occur in the beginning of May, whereas that of the Tigris occurs in March or April. The surface water river flow in Iraq territory is made up of the runoff flowing partly from outside of the Iraqi territory and partly within the Iraqi border. The Tigris and Euphrates basins encompasses mainly parts of Turkey, Syria, Iraq and, to a lesser degree, Iran and Saudi Arabia. The recorded average yearly inflow (Crossing Iraqi Borders) is 94.392 km³. This Includes 28.179 km³ from the Tigris basin, 31.191 km³ from Euphrates basin, 35.022 km³ from Small estrean tributaresm Karkheh and Karun, in addition to 20.9 km^3 which is generated within Iraqi territory. Total water resources of Iraq are therefore 115.292 km³ [8]. Water quality in the Euphrates is affected by return flows from irrigation projects in Turkey and Syria, and is expected worsen as irrigated land is added. Within Iraq, much of the return flow is now drained into the Arabian Gulf through the Main Outfall Drain, but considerable saline return flow enters the river system. On the Tigris River, the quality is further degraded with flood flows diverted into off-stream storage in the highly saline Tharthar Lake, and later returned to the river system carrying salts washed from the lake.[13]

4.3.2 Groundwater resources

Underground water whose salt content is less than 1.0 gm per liter is in the Terrain area in which there is a surface feeding, an example of which is the Alton Kobri area, where there are sediments of the Quaternary age consisting of gravel with high permeability and fed from the lower Zap, where the quality of water is obtained Good (salinity less than 1.0 g per liter) when drilling wells with depths of (100-150) meters and productivity ranging from (4-6) liters per second.

As for the aquifer in the foothills of the northeastern mountains, where the Igneous Rocks do not contain pores and therefore there is no groundwater and the presence of groundwater only in the valleys in those areas of good quality and low productivity. promising areas.

The area located on the right side of the Euphrates River refers to the Western Desert, which can obtain groundwater by digging wells ranging between (100-400) meters, where the areas near the Euphrates River have a depth of up to (100) meters and the depth increases towards the depth of the desert to reach The depth of (400) meters, and the productivity of these wells is more than 15 liters per second in the

[13] Ministry of Water Resources of Iraq, 2014. Strategy for Water and Land Resources of Iraq 2015-2035

areas near the Euphrates River and decreases towards the depth of the desert to reach 4 liters per second in the border areas. As for the water salinity, it is more than (1.0) gm per liter, and the salts increase with the movement of groundwater from the west and southwest towards the east and northeast. Except for some areas located on the seasonal valleys streams (such as the two areas of Kasra located on Wadi Tabal and Al-Nukhayb located on Wadi Al-Abyad), the amount of salts is less than (1.0) gm per liter.[14]

4.4 Biodiversity

The combination of rain shortage and extreme heat makes much of Iraq a desert. Because of very high rates of evaporation, soil and plants rapidly lose the little moisture obtained from the rain, and vegetation could not survive without extensive irrigation. Some areas, however, although arid, do have natural vegetation in contrast to the desert. For example, in the Zagros Mountains in northeastern Iraq there is permanent vegetation, such as oak trees. Date palms are found in the south.

The majority of sites important for biodiversity conservation have no protected area status, although many have been recommended for designation. For example, Bird-Life International has recognized a total of 42 sites as 'Important Bird Areas' (IBAs). These cover a combined area of 35, 000 km^2, or about 8% of the country's surface area.

The UNEP-WCMC Species Database lists 73 terrestrial mammal species (plus a further three species known to be extinct). 46 of these, including three bat species, Eurasian otter (*Lutra lutra)* and smooth-coated otter are listed as 'vulnerable' in the 2002 IUCN Red List.

A large number of reptiles occur in Iraq, but information on their distribution and conservation status is limited. The 2002 IUCN Red List ranks the Euphrates soft-shelled turtle (*Rafetus euphraticus*) as 'endangered', and common tortoise (*Testudo graeca*) as 'vulnerable'.

Over 400 species of birds have been recorded in the northern Gulf Region (comprising Kuwait, Iraq, eastern Saudi Arabia and western Iran). Among the species occurring in Iraq, white-headed duck (Oxyura leucocephala) which is listed as endangered in the 2002 IUCN Red List, while Socotra cormorant (Phalacrocorax nigrogularis), marbled teal (Marmaronetta angustirostris), greater spotted eagle (Aquila clanga), imperial eagle (Aquila heliacal), lesser kestrel (Falco naumanni), corncrake (Crex crex), and sociable lapwing (Vanellus gregarious) are listed as vulnerable.

Nine more species are listed as 'conservation dependent' or 'near threatened'. The region is especially important as part of the intercontinental flyways used by huge numbers of birds moving between Africa

[14] The Euphrates River and the South Eastern Anatolia Development Project; Dogan Altinbilek, Water Resources Development, vol. 20, no. 1, pp. 15-33, March 2004.

and Eurasia. It has been estimated that some two to three billion migrant birds move south across Arabia each autumn.

4.5 Healthcare Waste Treatment[15]

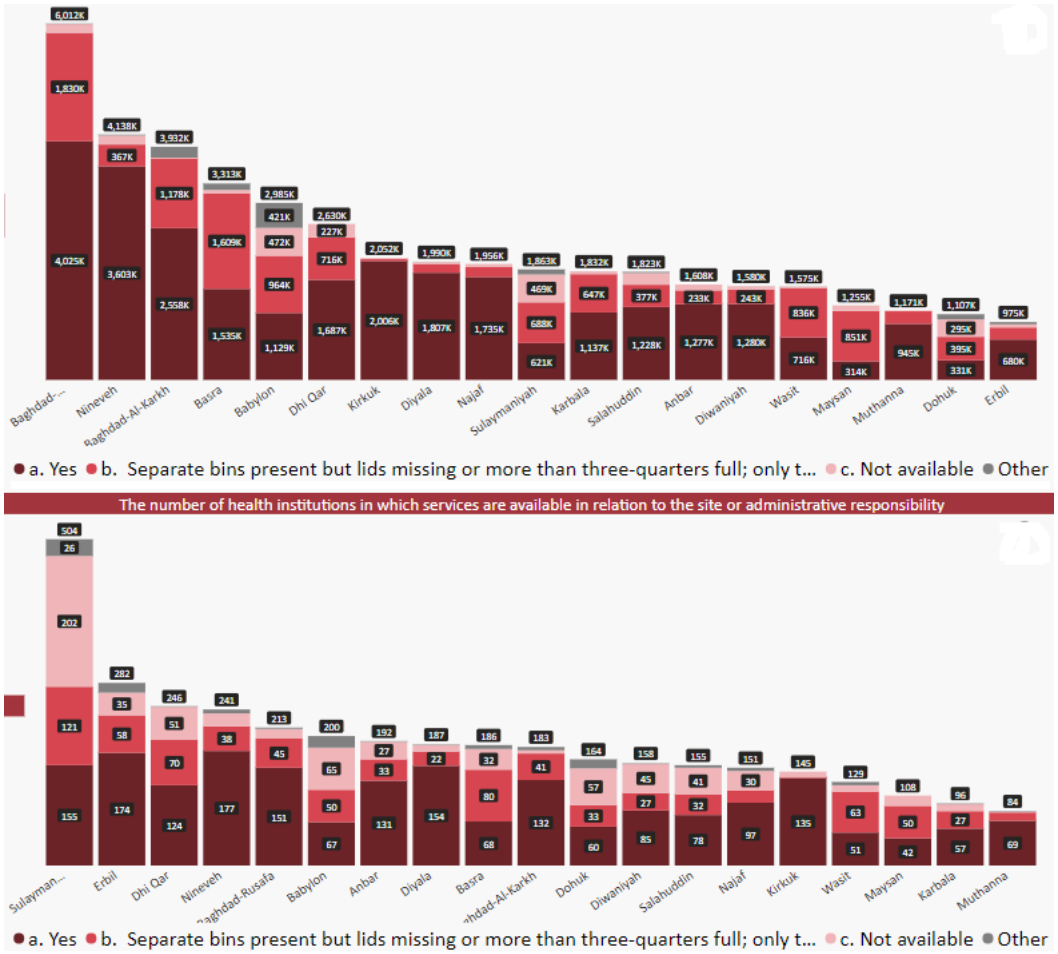
The latest surveys of the Iraqi Ministry of Health dated 2021, showed that 82% of hospitals have trained people in medical waste management, 63% of hospitals sort medical waste in the places they generate it, and there are devices for treating medical waste in 38% of hospitals.

Two approaches are being used in variety health institutions in Iraq to manage medical wastes. Some health institutions use medical incinerators to handle these wastes and the residue are dumped in the designated landfill along with domestic waste. Others use shredder autoclaves to kill the microorganisms and convert into ordinary waste, which are then collected and disposed in landfills.[16] (source: Joint Monitoring and Analysis for WASH, IPC, Environment, Waste Management Services in Health Facilities in Iraq 2021)

Some figures on presence of MW bins in health facilities in Iraq are shown below. More details about the MWM system are available on the MOHE website.

[15] The link of dashboard about joint monitoring and analysis for WASH, IPC, environment, waste management services in health facilities in Iraq 2021. It is a joint efforts of WHO, UNICEF with federal MoH and KRG MoH.
https://app.powerbi.com/view?r=eyJrIjoiNzE1NGJlNzItOTVkMy00N2MwLWE4OTAtZjU3NmZiNDNjMzRjIiwidCI6ImY2MTBjMGI3LWJkMjQtNGIzOS04MTBiLTNkYzI4MGFmYjU5MCIsImMiOjh9

[16] https://ijisrt.com/wp-content/uploads/2019/06/IJISRT19MY670.pdf



Medical waste management (MWM) in Iraq is regulated by the Ministry of Health and Environment (MOHE) (Instructions No. 1 for the year 2015). Accordingly, these instructions define the health institutions Hazard medical waste, infectious waste, chemical waste, pressurized gases cylinders waste, and other hazardous waste. These instructions also outline the integrated methodology and requirements to handle the medical wastes. Article No.15 from Instruction No.3 of 2011 define the locations of hazardous waste disposal sites and provides the specifications of the hazardous waste dumping site, location constraint, technical requirements, ground water level, lining requirements, and others. The Iraqi government developed a national solid waste management plan in 2007, the MOHE has taken extensive and quick effective measures from that time to better monitor and evaluate medical waste management and provide ongoing training to personnel responsible for waste management in the private and governmental health institutions including hospitals and health care centers.

4.6 Social Baseline

4.6.1 Socio-economic Baseline relevant to COVID 19

Iraq is a large upper-middle income country with a Gross National Income (GNI) per capita of US$ 4,660 and a population of 40.15 million in 2020. Almost two decades after the Iraq war began, the country remains caught in a fragility trap and faces increasing political instability and fragmentation, geopolitical risks, growing social unrest, and a deepening divide between the state and its citizens. Oil price volatility and COVID-19 have amplified Iraq's economic woes, reversing two years of steady recovery. These twin shocks have deepened existing economic and social fragilities, adding further to public grievances that existed pre-COVID-19. The absence of fiscal space has limited the ability of the GOI to provide a stimulus to an economy highly dependent on oil exports for growth and fiscal revenues. As a result, the country experienced the largest contraction of its economy since 2003, with GDP contracting by 15 percent in 2020. Budget rigidities have constrained the GOI's ability to respond to COVID-19 and offer a stimulus package to restart the economy.

The economic downturn also had an impact on the welfare of Iraqis especially among informal workers and those in self-employment. Unemployment remained more than 10 percentage points higher than the pre-pandemic level. Pre-existing conditions of rising unemployment and underemployment particularly among youth and internally displaced persons (IDPs) are likely to worsen with the current crises. The loss of household income and social assistance has increased vulnerability to food insecurity. COVID-19 has also severely limited child learning as evidenced by the small proportion of students engaged in learning activities during school closure. These impacts coupled with reduced access to market and healthcare services undermined human capital accumulation and economic mobility.

An additional 2.7 to 5.5 million Iraqis could become poor due to the COVID-19 crisis. This is in addition to the 6.9 million Iraqis already living in poverty. A large vaccination campaign is a key element for future recovery from the health and economic impact of the COVID-19 pandemic.

Iraq is facing a combination of acute shocks which the country is ill-prepared to manage. The outlook, which was already negative prior to the COVID-19 outbreak, has markedly worsened since. The protests that started in October 2019 and subsequent lock-down measures needed to contain the COVID-19 pandemic have dampened economic activities especially in services sectors. Almost two decades after the Iraq war began, the country remains caught in a fragility trap and faces increasing political instability and fragmentation, geopolitical risks, growing social unrest, and a deepening divide between the state and its citizens.

The priority assessment for COVID-19 vaccination has taken into consideration priority groups from a medical and a social perspective. The GOI has included the economically and socially vulnerable populations such as the displaced and refugees as priority cluster to be included in the vaccination plan under this project. The vaccine is given free of charge to eliminate any economic and financial barriers for the poor and the vaccination outlets have been distributed all over the country to enable easy access.

Provisions will also be made for people with reduced mobility either through access improvements in vaccination outlets or through mobile vaccination units that will reach people in remote areas or in camps.

4.6.2 Gender

Gender inequities and norms influence access to critical health services, as well as risk of exposure to disease, particularly in emergency situations and pandemics. Factors that constrain access to and use of health services by women in Iraq include limited mobility and financial capacity, competing demands of paid and unpaid work, and limited access to information. The reported incidence of COVID-19 is higher among men than women – 59% of registered COVID-19 cases in Iraq to date were among men. Moreover, women have also been impacted by the discontinuity of essential RMNCAH-N services, including for maternal and sexual and reproductive health, and GBV[17].

COVID-19 vaccine uptake is lower among women in Iraq. According to the findings of the Facebook survey conducted under I3RF, only 25 percent of female respondents indicated they would get vaccinated when the COVID-19 vaccine is made available compared to 40 percent of male respondents. Actual vaccination coverage shows more stark gender differences in uptake, with men receiving 66 percent of vaccines delivered to date. Until recently, nursing mothers and pregnant women were not eligible to receive COVID-19 vaccines This can also partly explain the lower vaccination rates among women.

Lack of understanding of the benefits and importance of the vaccine could have serious repercussions in the uptake among priority population groups, especially women who have more limited options to access information than men. For example, 67 percent of women in Iraq use the Internet compared to 84 percent of men. These gender dimensions intersect with other inequities, particularly for populations that are poor, with limited access to formal education, living in hard-to-reach areas, temporary or informal settlements, or living with disabilities.

4.6.3 Sexual Harassment, Sexual Exploitation and Abuse

Recent global and regional reports have shown an alarming increase in GBV cases during the pandemic, in particular domestic violence. Many of the measures necessary for controlling a viral outbreak have also significantly limited the ability of survivors to shield themselves from their abusers, or access support mechanisms. Iraq is no exception. The GBV Information Management System (GBVIMS) has recorded a marked rise in the number of reported incidents of violence in 2020.[18]

While the Government of Iraq has been taking steps to end gender-based violence at the national level, such risks are still relevant to the project implementation and relevant GBV prevention, risk mitigation and responsive actions will be put in place for the project.

[17] UN Women (2020). Report on the Impact of COVID-19 on Women.
[18] Gender Based Violence Information Management System Annual Narrative Report. January – December 2020. https://iraq.unfpa.org/sites/default/files/resource-pdf/gbvims_narrative_report_of_2020.pdf

5 Environmental and social risk and mitigation

The matrix below lists the environmental, social and other potential risks of the Project and the required mitigation measures.

Me

Risk	Impact	Mitigation measures	Existing measures
Environmental Risks			
Medical Waste	Transmission of COVID-19 to workers and the community Pollution of soil and surface and groundwater resources	All health facilities, as confirmed by MOHE, have a medical waste management plan.For the medical waste at each mobile unit, it will be stored in safety boxes "sharps containers" for disposal of syringes, needles, and other contaminated sharps, while other waste will be stored in labeled container as per the waste they contain, then it will be collected at the specific health facility that mobile unit belongs to. The final process will follow the same procedures (i.e., either using medical incinerator or autoclave shredder). 170 autoclave shredders will be procured under the project. And ICWMP (following WHO and national guidelines) has been developed with this ESMF and should be adhered to. Monitoring of the implementation of the ICWMP will be done by the PMU and the TPMA	Medical waste management plans already exist, they will include the extra shredding autoclaves All medical incinerators at health facilities have an ESIA as per Ministry of Environment requirements. Under these ESIAs, the EHS impacts/risks on the environment (air, water/ground water, soil, heavy metals, etc.) and on community/ staff health and safety have been identified with the proportionate mitigation measures

Risk	Impact	Mitigation measures	Existing measures
			according to national and WHO guidelines.
Occupational Health and Safety	Infection of workers and the community at large with COVID-19	the ICWMP developed with this ESMF, includes measures for infection control within and outside the HCCs. Adherence to the recommendations of the ICWMP in terms of infection control is key to a safe vaccination process.	OHS measures exist additional measures will be added.
Logistical challenges in transporting vaccines across the country in a timely manner, adhering to the recommended temperature and transportation requirements and traffic/road safety risks associated with transporting vaccines as well as with handling, transportation,	Deterioration of vaccines due to inadequate temperature during storage and transport caused by power failures or defective equipment. Spills of vaccines during storage, transport and vaccination	Follow up and assurance of the conditions that must be met in the cold chain before storing the vaccine. The cold chain equipment must be calibrated, clean, and operating with high efficiency and need to be fully functional at least 48 hours before the expected vaccine arrival date. Ensure that cold chain temperatures are monitored periodically and daily; where possible, by electronic data loggers. Temperature monitoring devices and a mechanism for continuous temperature monitoring should be in place throughout the supply chain from receipt, to storage and final delivery to the vaccination point; Perform effective and routine maintenance of the ULT and Low Temperature (LT) equipment Identify the location and availability of dry ice for	

Risk	Impact	Mitigation measures	Existing measures
		emergency purposes or in case there is a need for transporting the vaccine Ensure the presence of an additional back-up generator in case of power cut or UPS in order to maintain the temperature for a period of not less than 24 hours until the electrical current is restored or repaired. Estimate the storage capacity of each unit of cold chain equipment and matching it to the expected quantity to be received. Limit the number of vaccine vials in the vaccination centers to the number of people to be vaccinated on a day-to-day basis. This will reduce the need for storage and its risks and reduce the quantity of deteriorated vaccines in case of an accident. Any vaccination center should have an agreement with the relevant authority to get continuous power supply and alternative source of Power supply such as a private generator. The possibility of the use of Uninterruptible Power Supply (UPS) units are also under study. A UPS can ensure a 6-hour back up time for a freezer in case of power failure. **As for the vaccines:**	

Risk	Impact	Mitigation measures	Existing measures
		Ensure all vaccines are carried in specialized vaccine carriers with temperatures according to the manufacturers' instruction and transported only by authorized refrigerated vehicles specially equipped for this purpose that in line with WHO guidelines and BNT162b2 COVID-19 vaccine preservations instructions. Conduct a physical examination of the received vaccines for quality control purposes, ensuring the absence of damages, a leakage and presence of a sticker with basic information (such as the type of vaccine, expiry date, manufacturing batch number and other quality control parameters. Make sure the vaccine is stored in the appropriate cold chain condition and according to the appropriate temperature, as soon as it is received. Arrange the vaccines inside the cold chains according to First to Expire First Out (FEFO). Put the vaccines in the correct vaccine refrigerator without delay with the shortest dated foremost to ensure adequate stock rotation. Make sure COVID-19 Vaccine (BNT162b2) vials remain upright at all times. Report the volumes, doses and ancillary items received and used	

Risk	Impact	Mitigation measures	Existing measures
		on an information system to facilitate managing, tracking and reporting on the vaccine stocks and consumption effectively and follow up on expiry dates. Perform a daily count post vaccination Prepare a clear vaccination schedule and back up to avoid extended periods of storage at the vaccination point; Estimate the need to request additional vaccine doses. Develop a procedure for spillages on skin/eyes and provide handwashing facilities and eyewash kits Develop a procedure for spillage on surfaces and provide gloves, paper towels and all material needed as per the local chemical disinfection policy. **As agreed with the implementing agency, the following measures are implemented to safeguard project's purchased vaccines/goods/equipment:** The PMU uses a register "spreadsheet" to record the details of purchased vaccines under the project, including among others; description, reference to contract, quantity, location, and the Governorate in	

Risk	Impact	Mitigation measures	Existing measures
		which the vaccines were deployed; The PMU will prepare a detailed distribution plan, which will include among others the description of all vaccines and beneficiary governorate; All items will be labeled by the suppliers; Special conditioned warehouse register will be used for the received vaccines; Special committees will be established to receive the purchased vaccines. The committee will be responsible for vaccine inception upon delivery at the location to confirm quantity and quality as per the signed contract; Items will be stored in a designated area that would be easy to differentiate from all other inventory (vaccines) items; Warehouses will be maintained to provide the necessary conditions to protect the vaccines from weather, heat, theft, damaged, etc.); and Annual stock-taking will be performed by governorates, and the PMU will compare to its own register of assets; Close monitoring of the vaccine transport, storage and use	

Risk	Impact	Mitigation measures	Existing measures
		process should be done by the PMU and TPMA An Emergency Preparedness and Response Plan (ERP) is also be developed within this ESMF (refer to Section 9.9)	
Preventing the risks of health and safety issues related to unforeseen effects of vaccination	Health related side effects of vaccination	Monitoring side effects through follow-up by community healthcare workers Develop and AEFI reporting strategy including patient education on side effects Vaccination centers/hospitals will be reporting AEFI at the vaccination and through an assigned hotline where subjects can send a message case of a suspected AEFI. The hotline officer categorize them to either information about vaccines, complaints, or AEFI. The hotline officer (the hotline number will be provided for all vaccinated individuals) will notify the follow-up team of any subject with AEFI on the electronic system including demographic data of the vaccinated person and all details about the vaccination dose and date. Serious AEFI (including death) and/or unusual AEFI will be immediately reported to a follow-up team and the National Safety Committee. The AEFI management processes will be in line with the WHO Global Manual for Surveillance of	

Risk	Impact	Mitigation measures	Existing measures
		Adverse events following Immunization. A surveillance system based on passive and active methodologies has been established to follow up vaccinated groups: 1. Observation following vaccination at vaccination centers 2. Self-reporting of recipients of the vaccine to ask about any side effects and complications following the vaccination 3. Setting up hotlines 07807820490 for vaccinated persons to notify of any symptoms or complications associated with vaccination. Responsible bodies: • MoHE • Health staff in the vaccination centers • Manufacturers and suppliers of the COVID-19 vaccines All the AEFI reports will be analyzed, coded, assessed and sent via VigiFlow to the Global database Vigibase by the PV department/Center.	

Risk	Impact	Mitigation measures	Existing measures
		Monitoring of implementation will be done by PMU and TPMA	
Increase of water and energy use.	Reduced availability of water Increased electricity loads and potential power failures for ULT freezers Increased GHG emissions	Use of low flow fixtures Raise awareness on water conservation Use renewable energy sources	
Fires	Injury or death of people Destruction of property	Vaccination sites should be in compliance with local regulations and WBG EHS general and health care facility guidelines for life and fire safety (L&FS) All vaccination centers should have • A fire safety plan • Fire prevention measures • Fire detection and alarm systems • Fire suppression equipment • Meeting points well indicated • Maintenance and testing of all fire related equipment	
Social Risks			
Unequal access for marginalized and vulnerable social groups including	People deprived of vaccination	The NVDP has ensured the inclusion of marginalized and vulnerable social groups including the disabled, elderly, the	

Risk	Impact	Mitigation measures	Existing measures
disabled, elderly, women, Internally Displaced Populations (IDPs) and refugees to access vaccines, people without access to internet/phone and illiterate people	Risk to health and life form COVID-19	Internally Displaced Populations (IDPs) and refugees. Displaced individuals and refugees living in camps are explicitly prioritized for vaccination under phase 2. According to the NDVP, IDPs will be vaccinated by fixed vaccination teams within the nearest health district or the nearest health center after providing proof that they are displaced or have refugee status. The central committees in the health district can use fixed or mobile MOHE medical clinics located within the camps, or health institutions or the sites of supporting organizations and non-governmental organizations (NGOs) located inside the camps provided that all the logistical requirements for vaccination are available according to the type of vaccine. Vaccination for this population group will be conducted under direct supervision of the health district or the health directorate and in coordination with camp directors. This is supported in parallel by the SEP and the communication campaign to make sure that the needed information reaches all segments of society in all the regions of Iraq including far rural areas. Mobile units might be used	

Risk	Impact	Mitigation measures	Existing measures
		to reach population with reduced mobility such as refugees. Access for the disabled will be ensured in all HCCs. Information in Braille will be developed for the blind. Support for the elderly is provided from registration to vaccination. Specific considerations in terms of media tools and messaging will be made when targeting women, men and vulnerable populations in rural areas who are much more likely to have limited access to information. The project aims to do this by training female workers in community-based organizations and women-led NGOs to help with the dissemination of vaccine information and ensure that the targeted messaging will resonate and lead to vaccination awareness and uptake among women and men. Gender inputs into the terms of reference of the communications plan will be detailed in the POM. All data collection, monitoring, and analysis will be done in a sex-disaggregated way wherever possible. The project components all also address gender dimensions with targeted interventions including: (i) positive discrimination vaccine registration and targeting activities to increase the	

Risk	Impact	Mitigation measures	Existing measures
		proportion of women receiving the vaccine to discontinue the trend of male preferencing; (ii) integration of gender-responsive approaches in communication strategies with the public, including use of multiple accessible mediums in local languages; (iii) use of targeted messaging, and the creation of responsive platforms for registry of inquiries and grievances through a variety of mediums to target women and different vulnerable groups; and (iv) support for promotion of awareness and use of gender-based violence services, including the expanded network of Integrated services at health facilities that offer medical, legal, psychosocial support and referrals. These interventions will be monitored and measured through the project's results framework, TPMA reports, and through safeguards instruments. Specific considerations in terms of media tools and messaging will be made when targeting women, men and vulnerable populations in rural areas who are much more likely to have limited access to information. The project aims to do this by training female workers in community-based organizations and women-led NGOs to help with the dissemination of vaccine	

Risk	Impact	Mitigation measures	Existing measures
		information and ensure that the targeted messaging will resonate and lead to vaccination awareness and uptake among women and men. Gender inputs into the terms of reference of the communications plan will be detailed in the POM. All data collection, monitoring, and analysis will be done in a sex-disaggregated way wherever possible.	
Social conflict, and risks to human security resulting from limited availability of vaccines and social tensions related to the challenges of a pandemic situation	Increased social tensions Riots Security breaches in vaccination centers Theft of vaccines Risk of injury or fatalities	The NVDP provided clear details that every eligible person, as per the priority populations, will have access to the vaccine, regardless of their economic and social status. It is the responsibility of GOI to ensure the most disadvantaged communities receive this vaccine as per the NVDP. The monitoring program will make sure there will be no black market and pre-registered persons and those to register directly at the vaccination site will receive the vaccine as per the priorities set in the NVDP. Implementation of the SEP and the communication plan is crucial is reducing tensions and creating an understanding of vaccination eligibility requirements. The SEP and communication strategy are also meant to increase trust in government. Close monitoring and wide public reporting on the proper implementation of the	

Risk	Impact	Mitigation measures	Existing measures
		NVDP are crucial in reducing tensions and feelings of exclusion or corruption	
Sexual Exploitation and Abuse/ Sexual Harassment (SEA/SH) risks	Physical, psychological and social damage to persons Reduced access to vaccines	Refer to Annex III Gender-based Violence Action Plan	All government employees sign Code of conduct
Inappropriate data privacy and protection measures		Incorporate best international practices for dealing with such data in such circumstances. The Iraqi penal code no. 111 year 1969 covers the safe management of information in general articles 437,438 The PMU will ensure that these principles apply through assessments of existing or development of new data governance mechanisms and data standards for emergency and routine healthcare, data sharing protocols, rules or regulations, revision of relevant regulations, training, sharing of global experience, unique identifiers for health system clients,	

Risk	Impact	Mitigation measures	Existing measures
		strengthening of health information systems, etc. The project will support the refining of the electronic registration system for vaccination and incorporation of data privacy and protection measures. The system operators should sign Codes of Conduct including appropriate clauses on confidentiality of information.	
Insufficient/not effective stakeholder communication on the vaccine roll-out strategy	Reduced access to vaccines and consequent effect on health Social tensions	The project developed a SEP and a communication strategy to make sure that information on the rollout of the vaccine and the NVDP are implemented. The SEP and the communication plan ensure the information reaches all the Iraqi population.	
The risk of elite capture and/or corruption as the COVID-19 vaccine will be in short supply relative to the demand	Reduced access to vaccines and consequent effect on health Social tensions	The PMU and TPMA should ensure close monitoring of the vaccine rollout as per the NVDP and the reporting of cases of possible corruption of the NVDP. The GRM and the World Bank GRS are tools to report any possible abuses and irregularities in the deployment of the NVDP.	

Risk	Impact	Mitigation measures	Existing measures
Risk to labor other than OHS such as from unlawful actions by employer, injury in the workplace mainly electrocution	Loss of job and income Forced labor Unsafe working conditions Injury or death	Enhance the GM to accommodate for labor grievances and posted in all sites Make sure all safety measures are observed during any type pf work related to the project such as wearing PPEs, hard hats safety shoes, gloves as required by the job in hand. Train staff on proper OHS in the workplace as relevant to the project Post safety signs on all work premises	
Security risks in vaccine transport and in vaccination centers	Theft of vaccines Contamination of people and area surrounding spill Riots in vaccination centers	The transport of vaccines is protected by the military. A Code of Conduct is signed by project workers. The security of vaccination centers is ensured by the police or military Develop an ERP to control accidental spills during transport	
Forced vaccination	Infringement on human rights and free choice	A voluntary vaccination policy was made clear through the SEP and will be disseminated through communication plan The GRM should be used to report any forced vaccination attempts People should be asked in vaccination centers if they are being forced into taking the vaccine	

Risk	Impact	Mitigation measures	Existing measures
Transport risk (road accidents)	Injury or death Damage to transport vehicles Destruction of vaccines and medical equipment	Training on safe driving Avoid high risk roads when possible Clean up of vaccines in case of spillage. • Wash eyes in case of contact • Wear gloves • Mop-up the vaccine and burn the mop safely • Assess the number of damaged vials • Clean-up broken glass Contact numbers for emergency response teams Car accident insurance	
Risks of using the military and security risks	Diversion of materials, aid and assistance: Allegations of human rights violations: Putting World Bank staff at risk: International media comment and reaction:	Refer to Annex IV Security Action Plan	AnnexVIII Employee Code of Conduct

6 Consultation and Disclosure

The WB's mandatory Policy on Disclosure applies to this project. Under this requirement, the ESMF and was publicly consulted. An online consultation meeting was conducted on June 24, 2021. Participants included representatives of government agencies, experts in health, marketing and communication, representatives of women and disabled groups, WB teams, and the PMU. Annex V provides the list of participants.

The consultation focused on the following topics:

1. The importance of vaccination and the economic impact
2. The environmental, social and psychological concerns around the vaccination program
3. The concerns of people who are not accepting to be vaccinated and reasons why.
4. Impressions about the different types of vaccines
5. Social pressures on people who received the vaccine
6. The access of women to vaccination and barriers
7. The access of people with disabilities to vaccination and barriers
8. Access to the online registration and knowledge of people on the process to follow get vaccinated
9. Access to grievance/complaint mechanisms
10. Environmental concerns around the project including transport, storage, and medical waste management
11. The draft ESMF

The instruments were disclosed through an oral presentation and a series of questions. Medical experts presented an overview of the COVID-19 virus and the status of vaccines and vaccination. Presentations and discussions were made on the acceptability of the vaccines, different concerns, and public feedback on vaccination

Concerns raised were around:

- Transport and cooling of vaccines
- The negative impact of media and misinformation and the weakness of proper information
- Logistics in the vaccination process and organization of the process in hospitals and health centers
- How to convince people who are hesitant to take the vaccine and those against vaccination
- Access of the disabled to vaccination centers
- Access to information to people living in remote locations such as in mountains and marshes.
- The acceptance of public servants to be vaccinated

Suggestions were made to:

- Increase direct public engagement and awareness around the vaccine and vaccination
- Improve information access for the disabled including Braille information leaflets, sign language information videos and disabled adapted infrastructure at vaccination centers. Special care should be taken for disabled women in remote areas especially regarding access to information.
- Counteract misinformation around COVID-19, vaccines, and vaccination.
- Direct engagement by MOHE of public servants to improve vaccine acceptance
- Engage sports and youth clubs, elderly homes, and orphanages

- Provide support for MOHE in innovative public engagement and awareness raising methods

Feedback received during consultation will be taken into account by the PMU and MOHE and has been included in the revised ESMF and the revised SEP and will be included in other safeguard instruments. Due to the proven efficiency and effectiveness on the virtual consultation meeting held on June 24th, 2021, the PMU and MOHE plan to hold similar consultation meetings throughout the project. The participants invited to these meetings shall vary in order to allow as many stakeholders to engage as possible.

This process:

- Gives the public and other stakeholders the opportunity to comment on the potential environmental and social impacts of the project,
- Enables the Appraisal Team to enhance the ESMF, i.e., its measures and plans to prevent or mitigate any adverse environmental and social impacts

In line with this requirement, the environmental and social assessments will be disclosed:

- In-country on the MOHE website and other public locations
- WB's external website in English (documents can be in draft but must meet WB standards)

The Environmental and Social Commitment Plan and Stakeholder Engagement Plan was disclosed prior to project appraisal by the MOHE and the WB in English. The MOHE will also publicly disclose the Arabic and Kurdish versions as soon as they're available. The MOHE will publicly disclose the English version of the ESMF before project negotiations. The MOHE will also publicly disclose an ESMF executive summary in Arabic and Kurdish before project approval.

7 Stakeholder Engagement

7.1 Stakeholder Engagement Plan (SEP)

During the project preparation, a virtual consultation meeting was conducted by the PMU and attended by 43 different stakeholders. Stakeholders were invited to share their thoughts, questions and concerns regarding the project setup and the associated environmental and social risks. Further to the consultation, a SEP was prepared and disclosed. The PMU is planning to hold consultation meetings throughout the Project life cycle and with a possibility of adding relevant stakeholders according to the needs of the project. Stakeholders' meetings will also take place when there is a need and per the findings of the GM. Stakeholders identified in the SEP and new identified stakeholders will be reflected in an updated SEP as required which will be updated and re-disclosed as needed. All stakeholders will be kept informed as the project develops, including reporting on project environmental and social performance and implementation of the stakeholder engagement plan and grievance mechanism.

Refer to SEP developed separately for this project.

7.2 Grievance Redress Mechanism: COVID-19 Vaccination.

An effective Grievance Redress Mechanism (GRM) was put in place in 2016 and 2017 at MoHE covering primary health care centers and hospitals and can be used for the GRM relevant to COVID-19 vaccination. The system is functional, but it will be updated to include designated COVID-19 lines: 07901939809 or 07726180982. Grievances will be handled efficiently and in a specified timeline and not exceeding 5 days. The capacity of the GRM reception unit will be extended to receive and respond to any additional calls, and daily reports are kept for the calls received at COVID-19 line. An additional number of operators will be needed, as well additional IT equipment in case of increasing complaints. Through the grievance process, information remains anonymous and does not require the survivor to record more details than nature of the complaint, such as background information of the survivor and information on whether the survivor was referred to services. For SEA/SH related complaints, referral pathways will ensure coordination with the relevant NGOs. The GRM will also have in place an appeal process in the event of unresolved grievances whereby a complainant who is unsatisfied with the response or in case of unresolved grievance, such as someone thinking they should be vaccinated earlier, the patient will have the option to escalate their grievance to MOHE PMU senior management. Grievances will be handled efficiently, immediately where possible, or within a timeline of 3-5 days. All staff and operators who will be handling the GRM will receive the necessary training for effective handling of complaints including on any potential social related complaints, complaints from the elderly or other vulnerable groups and grievances regarding the conduct of security personnel.

The receipt of any complaint by MoHE will be through the **Complaints and Investigation Section** through the complaints GRM reception unit and will be handled by the units listed below as per the tasks and duties of each unit

- **Complaints Reception Unit:** receives and converges telephone complaints through the department's official phone numbers announced in all health institutions to be available to all citizens (07901939809 or 07726180982). All health departments and vaccination sites have also been informed of the department's official e-mail address (dep.ci2017@gmail.com) to receive citizens' complaints, especially when documents and supportive documents are needed.
- **Monitoring, and Information Analysis Unit**: studies and analyzes all complaints received by the Complaints Reception Unit and transfers them to the responsible of the division (copy of complaints shall be sent to the E&S team for reporting).
- **Follow-up Unit:** Follows up on the actions taken regarding the complaints received by the division before presenting the complaints to the general manager to take appropriate actions (copy of actions relating to complaints shall be sent to the E&S team for reporting).
- With regard to **urgent complaints** that require urgent attention, the procedure is either through the formation of urgent central committees from the department or through transmitting them directly to the concerned health departments by telephone.

The structure of GRM will also cover the COVID-19 vaccination related issues such as people starting to show symptoms and need to be assessed and referred to hospitals, questions and complaints. A designated number will be put in place for COVID-19 vaccination.[19]

A daily report is being kept for the calls being received regarding COVID-19 vaccination. Names and numbers of the callers are taken and registered. However, anonymous grievances can be raised and addressed. The project will also record the complaints received related to the project in general such as environmental concerns.

For any kind of abuses related complaints, referral pathways may include coordination with the relevant NGOs. Doctors, nurses and vaccinators will also have the option to file their grievances through the MoHE internal procedures and primarily through the "diwan" or "registrar" where all grievances will be officially recorded and addressed by the responsible staff at the MoHE. Another uptake channel for internal complaints is through the grievance boxes allocated throughout the MoHE. In addition, the grievance boxes allocated at the selected vaccination centers / hospitals under the national vaccination plan will be another uptake channel for doctors, nurses and vaccinators to register their grievances which will accordingly be handled by the relevant hospital staff. The principles of confidentiality and anonymity will also be applied to the internal grievances redress mechanism.

The GRM will be clearly documented with close follow up by the responsible persons who will follow up and monitor the GRM in a GRM log.

Responsibilities:
The overall accountability concerning the management of the Grievance Mechanism Procedure lies with the MOHE PMU. The Environmental and Social Specialists are responsible for overseeing the

[19] Letter issued by the MoHE – Reference No. 507 dated 25/02/2021

implementation, monitoring and treatment of the grievances and informing his/her counterpart at the WB of the status of the grievances.

In general, if an individual or an organization files a grievance it is because an activity carried out by the project is causing (or could cause) damage or because the claimant perceives the activity as damaging. As such, the claimant expects a response, justification and/or compensation from the project. All grievances are considered admissible and must be considered, the subsequent investigation will determine whether or not the grievance was justified.

Refer to SEP for GRM

8 Project Implementation Arrangements, Responsibilities and Capacity Building

The MOHE will be the implementing agency for the project. The GOI has established a new Project Management Unit (PMU) headed by the Deputy Minister of Health to oversee project implementation. The PMU will be responsible for the day-to-day project management, including fiduciary management (procurement and financial management (FM), and will: (i) coordinate project activities; (ii) ensure screening and Rapid Environmental and Social assessment and implementation of ESF requirements (iv) ensure the financial management of the project activities in both components; and (iv) prepare consolidated annual work plans and budgets; (v) conduct monitoring and evaluation of project activities; and (vi) prepare the implementation report of the project to be submitted to the World Bank. Additional personnel will be recruited to ensure sufficient capacity to implement the project. High-level coordination will be organized through the appointed National Coordinating Committee chaired by the Deputy Minister of Health for Administrative Affairs.

As for handling the E&S issues, the PMU has assigned two environmental specialists, two social specialists, one communication specialist, and one GM specialist.

A third-party monitoring agency (TPMA) will be contracted by the MOHE. The TPMA will be responsible for monitoring compliance of the vaccination efforts with Iraq's NDVP, WHO standards, and ESF implementation as well as World Bank requirements on technical, environmental, and social issues The work of the TPMA will therefore contribute to ensuring safe, effective, efficient, and equitable vaccine rollout and maximizing its population benefits. This will also contribute to the GOI's efforts to increase the demand for and build trust in COVID-19 vaccination among the population. The GOI will prepare a detailed terms of reference (TOR) that is subject to World Bank technical approval, defining the specific roles and responsibilities of the TPMA. The TPMA role can be filled by a United Nations (UN) agency (or agencies), international or local non-governmental organizations (NGO), or consulting firms that meet the criteria agreed upon between the World Bank and MOHE.

Progress towards project objectives and results indicators will be monitored by the PMU. The PMU will include monitoring and evaluation specialists who will be responsible for collecting and processing relevant data, working closely with the Directorate of Public Health. The MOHE has established a system for monitoring the implementation of the vaccination campaign in line with the NDVP according to which the Inspection Directorate at the Federal MoHE and its branches in all health directorates will be responsible for monitoring vaccination activities.

The implementation of the ESMF mitigation measures will be supported through the project resources and will be covered mainly by the budget allocated to Sub-component 1.2 (Support for Deployment of COVID-19 Vaccines that is US$25 million.

9 Annex I -Infection Control and Waste Management Plan (ICWMP)

9.1 Project context

Iraq is one of the countries hardest hit by COVID-19 in the Middle East and North Africa (MENA) region. As of August 29, 2021, Iraq has recorded a total of 1,874,435 confirmed cases and 20,699 deaths. The daily number of new cases gradually declined from the peak of 5,055 cases on September 24, 2020, only to start rising again from the beginning of February 2021. A third wave is currently underway, with 13,515 cases reported on July 28, 2021 - the highest number of daily cases reported to date since the start of the pandemic.

As of August 29, 2021, a total of 5,156,720 COVID-19 vaccine doses have been administered, covering approximately 12 percent of the total population. Of the total number of vaccinated people 3,274,154 received one dose, while 1,749,134 have been fully immunized with two doses.

The project will provide upfront financing to help the government purchase and deploy COVID-19 vaccines from a range of sources that meet the World Bank's Vaccine Approval Criteria (VAC). The financing will enable affordable and equitable access to COVID-19 vaccines for approximately 7 percent of the country's population and help ensure effective vaccine deployment in Iraq through vaccination system strengthening. In particular, it will support the country in procuring additional doses through direct supply agreements with vaccine manufacturers in order to build a portfolio of options to expand Iraq's access to vaccines under the right conditions (e.g., of value-for-money, regulatory approvals, and delivery time among other key features). As of April 16, 2021, the World Bank will accept as threshold for eligibility of IBRD/IDA resources in COVID-19 vaccine acquisition and/or deployment under all World Bank financed projects: (i) the vaccine has received regular or emergency licensure or authorization from at least one of the Stringent Regulatory Authorities (SRAs) identified by the World Health Organization (WHO) for vaccines procured and/or supplied under the COVID-19 Vaccines Global Access (COVAX) Facility, as may be amended from time to time by WHO; or (ii) the vaccine has received WHO Prequalification (PQ) or WHO Emergency Use Listing (EUL). As vaccine development is rapidly evolving, the World Bank's VAC may be revised. All vaccines financed by the World Bank will be provided free of charge, and no user fees will be levied. The project financing enables a portfolio approach that will be adjusted during implementation in response to developments in the country's pandemic situation and the global market for vaccines.

9.2 Project Development Objectives

***Project Development Objective (PDO) statement*:** The development objective is to support the Government of Iraq in the acquisition and deployment of COVID-19 vaccines.

PDO level indicator:

I. Percentage of specific priority populations fully vaccinated (total and disaggregated by sex)
II. Percentage of COVID-19 vaccination sites with adequate health care waste management for vaccination.
III. Number of COVID-19 vaccine doses acquired through World Bank financing.

The Project objectives are aligned to the results chain of the COVID-19 SPRP. Critical interventions are needed to reduce morbidity and mortality rates from COVID-19 in Iraq. The implementation of Iraq's NDVP will strengthen the capacity of the GOI, and more specifically, the MOHE to ensure access to affordable COVID-19 vaccines for the population.

9.3 Project Components

Component 1: COVID-19 Vaccines and Deployment (US$97 million IBRD). The component will support the purchase of COVID-19 vaccines and related deployment activities.

Sub-component 1.1: COVID-19 Vaccine Support **(US$72 million IBRD).** This subcomponent will support the purchase of approximately 6 million doses of the COVID-19 vaccines that meet the World Bank's VAC. This is expected to cover 3 million individuals or approximately 7 percent of the population in Iraq. Given the recent emergence of COVID-19, there is no conclusive data available on the duration of immunity that vaccines will provide. While some evidence suggests that an enduring response will occur, this will not be known with certainty until clinical trials follow participants for several years. As such, the financing will allow for re-vaccination efforts if they are warranted by peer-reviewed scientific knowledge at the time. In the case that re-vaccination is required, limited priority populations (such as health workers and the elderly) will need to be targeted for re-vaccination given constraints on vaccine production capacity and equity considerations (i.e., tradeoffs between broader population coverage and re-vaccination).

Sub-component 1.2: Support for Deployment of COVID-19 Vaccines **(US$25 million IBRD).** This sub-component will support system strengthening to successfully deliver COVID-19 vaccines at scale. This will include, inter alia, (i) procurement of equipment for health care waste management (minor electrical wiring might be required) , (ii) support for refining the electronic registration system for vaccination, (iii) vaccine logistics and supply chain management; (iv) communication initiatives to address vaccine hesitancy, (v) monitoring and management of adverse effects following immunization (AEFI) , and (vi) technical assistance associated with vaccine rollout. The project will prioritize supporting Iraq to address the key gaps identified by the readiness assessment, in close coordination with WHO, UNICEF and other development partners. Given the uncertainties surrounding COVID-19 vaccination, the activities will be updated throughout project implementation through time-bound work plans agreed with the MOHE. Collaboration is envisioned with other World Bank Global Practices in defining, to the extent possible, sustainable and high-efficient energy solutions to improve the deployment of vaccines. Technical assistance can be provided to ensure that energy efficiency standards for upgraded cold chain are applied for COVID-19 vaccines and beyond, including through the development of micro-plans to integrate climate-related considerations (e.g. energy efficiency or promotion of hybrid energy source consumption

for cold chain). The project will also support the procurement of effective and low-emissions health care waste management equipment that will also contribute to improving the resilience of health care waste management systems to extreme precipitation. In addition, the financing will support the implementation of the COVID-19 communication action plan by the MOHE and hired firms. Communication campaigns will be tailored where necessary for specific groups (e.g. women in rural groups, IDPs) and include information on procedures/plans in case of extreme weather or other climate-change-induced events.

Component 2: Project Management and Monitoring and Evaluation (M&E) (US$3 million IBRD and Trust Fund). This component will support the coordination, implementation, and management of project activities, including third party monitoring.

Sub-component 2.1. Project Management and M&E (US$1 million IBRD) will support the coordination, implementation, monitoring and evaluation, and management of project activities, including through: (i) development of a system for project monitoring and evaluation; and (ii) provision of relevant technical assistance to support the MOHE in the implementation, management, monitoring and evaluation of the project, including through operating costs and ensuring compliance with the Environmental and Social Commitment Plan. Specifically, this may include support for (i) the supervision by MOHE teams of the deployment of COVID-19 vaccines and installation, functionality, and use of equipment and supplies acquired under the project; (ii) development of a system for project monitoring and evaluation by the PMU team; (iii) hiring of an external auditor for the project; (iv) hiring of a media production company to assist with the production of relevant materials for dissemination to project beneficiaries.. This component will monitor COVID-19 vaccines deployment and therefore improve data collection, analysis, reporting and use of data for action and decision-making. Climate and gender-specific activities supported by the project will also be monitored.

Sub-component 2.2. Third Party Monitoring (US$ 2 million Trust Fund). A third-party monitoring agency (TPMA) will be contracted by the MOHE using grant financing from I3RF. The TPMA will be responsible for monitoring compliance of the vaccination efforts with Iraq's NDVP and WHO standards, as well as World Bank technical, environmental, and social requirements. A draft terms of reference (TOR) has already been prepared. The final TOR will be subject to World Bank technical approval, defining the specific roles and responsibilities of the TPMA. The TPMA role can be fulfilled by a United Nations (UN) agency (or agencies), international or local non-governmental organizations (NGO), or consulting firms that meet the criteria agreed upon between the World Bank and MOHE.

9.4 Selected Healthcare Facilities

The GOI has identified 1301 health facilities across Iraq to serve as vaccination sites. In addition, 150 mobile units operate daily to expand vaccination coverage. There are plans to further expand the number of vaccination sites.

Medical waste will be treated at each HCF either through incinerators or autoclave shredders. The GOI waste management plans and WHO guidelines for HCF waste management especially for COVID-19 infected waste will be followed.

For the medical waste at each mobile unit, it will be stored in safety boxes "sharps containers" for disposal of syringes, needles, and other contaminated sharps, while other waste will be stored in labeled container as per the waste they contain, then it will be collected at the specific health facility that mobile unit belongs to. The final process will follow the same procedures (i.e., either using medical incinerator or shredding autoclave).

Installation and operations of incinerators have the potential of causing significant environmental and social risks. These could include air pollution due to toxic fumes resulting from poor site selection, inadequate stack height, burning of unsegregated waste at low temperatures etc. Heavy metals in the incinerator ash could pollute soil and water, if not properly disposed in a safe burial pit. Inadequate storage facilities for fuel could result in fire hazards during operations. During construction, good quality materials are critical to ensure longevity of the incinerator, along with close attention to aspects of sealing and temperature management. Worker health and safety issues also need to be well managed during construction phase. Incinerators should be installed in a protective enclosure or suitably ventilated building to prevent access by unauthorized persons and to protect the equipment. Community health and safety risks due to air and soil pollution, noise, odour etc will need to be managed during construction and operations phase.

According to the Iraqi environmental legislations, all medical incinerators at health facilities need to get a permission from Ministry of Environment. Therefore, an ESIA is a mandatory requirement before installing and operating of these incinerators. Under these ESIAs, the EHS impacts/risks on the environment (air, water/ground water, soil, heavy metal, etc.) and on community/staff health and safety have been identified with the corresponding mitigation measures according to national and WHO guidelines. The project will not finance the procurement and installation of incinerators.

9.5 Design requirements of the Health Care Facility (HCF)

The vaccination outlet should be designed as listed below and possesses the equipment needed to handle vaccines properly and ensure a safe environment for the staff and people getting vaccinated. Finally, the HCF should have all the needed facilities and equipment to neutralize and/or treat medical waste as per the requirements of the National laws and WHO standards. ***Subcomponent 2.1 will support*** procurement of equipment for health care waste management***. The issue of power supply is also of utmost importance due to the need for ULT freezers to conserve the vaccines. Electrical power supply in Iraq is intermittent and unreliable. Consequently, each HCC should be equipped with a back-up power system properly sized to cover the power needs of the vaccination process from cradle to grave.***

The vaccination unit will consist of a waiting room, a vaccination room and an observation room. The setting should allow for physical distancing measures (1.5 meters between individuals). All personnel should be equipped with the required PPEs. The below list details the requirements for a vaccination center in terms of architecture and required equipment.

Architecture

- Presence of appropriate entrances and exits in each site
- Space for registration and preparation of necessary documents
- Pre-vaccination waiting room
- Space and rooms for vaccination (3 stations on average per site)
- Clinic to treat possible side effects
- Hand washing stations
- Post vaccination resting room to monitor people
- A room for storing medical wastes prior to final treatment

Equipment

- HVAC system
- Cooling devices (ultra-low temperature, refrigerators, freezers, etc.);
- Power supply, alternative support sources (i.e. UPS, back-up power generators), and electrical sockets in vaccination rooms and offices
- ICT-support (computers, internet connection);
- Waste disposal bins: disposal of medical waste and sharp tools;
- Incinerators or Autoclaves for proper medical waste treatment. It is crucial to assess the proper functioning of the incinerators and autoclaves especially if the required temperatures for decontamination are reached.
- Fire safety requirements

Material

- Soap
- Hand sanitizers
- Surface disinfectants
- Cotton and band aid

PPEs

As vaccination teams will be in direct contact with vaccine recipients, disinfectants and PPEs are required as per WHO recommendations. The required PPEs will depend on the position and duties of team members:

- Sink and soap and water to be available. In addition to 2 hand sanitizers should be available at the vaccination site daily: 1 for personnel use and 1 for vaccine recipient use.
- One surface disinfectant should be available at the vaccination site daily.

- Physician: 4 masks per day (masks to be changed every 4 hours or when it becomes damp, whichever comes first), 1 reusable face shield, gloves (1 pair for every vaccine recipient), disposable gown (1 gown per day).
- Vaccinator Nurse: 4 masks per day (masks to be changed every 4 hours or when it becomes damp, whichever comes first), 1 reusable face shield, gloves (1 pair for every vaccine recipient), disposable gown (1 gown per day).
- Registered nurse: 4 masks per day (masks to be changed every 4 hours or when it becomes damp, whichever comes first), 1 reusable face shield, gloves (as needed), disposable gown (1 gown per day).
- Data entry clerk: 4 masks per day (masks to be changed every 4 hours or when it becomes damp, whichever comes first), 1 reusable face shield, gloves (1 pair for every vaccine recipient), disposable gown (1 gown per day).
- Non-clinical observer: 2 masks and 2 pairs of gloves per day (one for every site visit at the provincial level for a total of 2 visits).
- One biohazard plastic bag per site will be available daily for disposal of used PPEs and other infectious medical waste.
- Sharp boxes (plastic one for sharps and one for used vials)
- Subsequently, PPE requirements are estimated based on the number of vaccination days and human resources required. A wastage rate of 2 percent will be added to the calculated numbers.

9.6 Infection Control and Waste Management

9.6.1 Infection control

The MOHE plan for Infection Control (IC) is consistent with WHO recommendations and includes the use of standard precautions involving the following:

- Hand hygiene
- PPE according to the risk
- Respiratory hygiene (etiquette)
- Safe injection practices, sharps management and injury prevention
- Environmental cleaning
- Safe handling and cleaning of soiled linen
- Safe handling, cleaning and disinfection of patient care equipment
- Waste management

Adherence to IC guidelines is key to prevent the transmission of COVID-19 through vaccination operations. With the exponential increase in COVID-19 cases, it is crucial to establish strategies aiming at preventing the circulation of the virus through vaccination.

The below activities are crucial to minimize COVID-19 transmission during vaccination:

- Ensure that vaccination personnel are exempt from COVID-19: All personnel involved in vaccination should theoretically be screened for COVID-19 through clinical screening (daily temperature check and symptoms check). Any suspected case will be replaced immediately and

will be referred for PCR testing and adequate care. If a case is confirmed among vaccinators, contact tracing and follow up of those vaccinated will be conducted as per MOH protocols.

- Vaccine recipients will be screened for COVID-19 clinical symptoms prior to administration of the vaccine. Any suspected case will NOT be vaccinated and will be referred for PCR testing and adequate care. Individuals who were infected with COVID-19 will be allowed to receive the vaccine after they have fully recovered from COVID-19.
- Instructions related to physical distancing requirements and the flow of operations will be explained in a document that will be shared with vaccination sites and self-explanatory posters will be hung at the entrance to ensure maintenance of at least 1.5 meters distance between vaccine recipients within a queue or in the waiting area.
- Chairs and desks in direct contact with vaccine recipients should be disinfected after each use.
- An IC section will be included in the intra-vaccination monitoring form to monitor the adherence of personnel to the required measures.
- The HCC director will be responsible for monitoring the adherence of vaccinators to IC measures and will incite them regularly to oversee the compliance of their teams to the protective measures. Supervisors will be required to report to the MoHE on the adherence of their teams to IC measure on a daily basis.
- All medical waste (vials, syringes, PPEs, …) should be disposed of as per the national legislation and the recommendations of WHO on health care waste management reflected in this ICWMP.

9.6.2 Waste Management

The shredder autoclaves procured under the project will be designed, operated, and monitored in accordance with the WBG EHS guidelines for health care facilities (available at www.ifc.org/EHSguidelines).

9.6.2.1 Vaccination Related Waste Quantities

Below is an estimate of the amount of hazardous medical waste that will be generated due to the vaccination process.

1. **Vaccine Vials**: According to the MoU with Pfizer, the amount of vaccine is (6,000,000) doses, two shots per person, 56 days apart. The vial contains (5) doses, thus the total number of **vials will be (1,200,000).**
2. **Diluent Vials** The BNT162b2 vaccine diluent is a saline solution, and each vaccine vial requires 1.8 ml diluent. It is assumed that each vaccine vial will need one diluent vial. In case of lacking diluent vials with such amounts, 2 ml diluent vial should be provided, and if not, 5 ml diluent vial. The amount of diluent vials are the same as the number of vaccine vials, adding 10% as reserve. Thus, the total number of **diluent vials will be (1,200,000)**.
3. **Syringes:** Vaccine Administration Syringes: taking into consideration the 0.3 ml dose per person, this requires the provision of autodestruct syringes for this dose to facilitate injection. In case of

being unavailable, a 0.3 ml autodestruct syringes or 1 ml normal syringes should be provided. In both cases, high level training and accuracy are required to control the required vaccine dose. According to the amount of doses to be supplied, adding (10%) as a reserve for wasting purposes, the number of required **syringes will be (6,600,000**).

4. **Diluent Syringes**: it should match the amount of diluent vials, **namely (1,200,000)**, either (2 ml) or (5 ml) syringes.
5. **Disposal Boxes (Security Boxes):** According to WHO recommendations, the disposal boxes are assumed to be one box for every (100) syringes, adding a minimum reserve of (50%). With the number of administration syringes amounting to (6,600,000) and diluent syringes (1,200,000), the syringes total will be (7,800,000). Therefore, **the number of required disposal boxes will be (117,000).**
6. **Anaphylactic Shock Medications:** Adequate amounts of anaphylactic shock medications must be provided in the vaccination outlets in line with the number of beneficiaries of such outlets, and in view of any allergic reactions or side effects associated with the vaccination process. These medications include (Hydrocortisone Vial, Diphenhydramine Ampoule, Dexamethazone Ampoule, and Adrenaline Ampoule). This requires adding an adequate number of syringes and disposal boxes and following central instructions for such medications administration.
7. **Personal Protective Equipment (PPE):** This will be calculated later according to the number of required vaccine administrators and vaccination days, adding an amount not less than 10% as a reserve.
8. **Cotton and Band Aids.** Cotton is used in to disinfect the vaccine injection area prior to the shot and a band aid is applied on the injection spot after the vaccine. It is estimated that 6 million cottons swabs and 6 million band aids will be generated from the vaccination process. The cotton is disposed of in the hospital, the band aids however, might be disposed of at the place of residence of the vaccinated person or somewhere else.
9. **Sanitizers and disinfectants.** Containers of hand sanitizers, soap and surface disinfectants should be treated as medical waste because of possible accidental contact with COVID-19 infected patients. The quantity cannot be estimated at the present time
10. **Containers, boxes and bags.** These are medical waste that used to hold vials, syringes, PPEs, medication, cotton, band-aid, etc. The quantity cannot be estimated at the present time
11. **General waste.** People waiting to be vaccinated or resting after vaccination could generate domestic waste such as tissues, water bottles, etc. This type of waste cannot be estimated and should be considered as medical waste because of possible accidental contact with COVID-19 infected patients

9.7 HCW Management System in Iraq

According to a recent study, hazardous solid wastes were found to be about half a ton per month in official hospitals, 167 kg per each private hospitals and 83.3 kg per PHC center. For managing the medical waste, some health facilities used medical incinerators to handle these wastes, and the residue was dumped in the designated landfill along with domestic waste. Others used shredder autoclaves to kill the

microorganisms and convert into ordinary waste, which was then collected and disposed in landfills. However, not all heath facilities are fully equipped with incinerators or autoclave and shredders. This the case for both governmental and private health facilities.

Medical waste management (MWM) in Iraq is regulated by the Ministry of Health and Environment (MOHE) (Instructions No. 1 for the year 2015). Accordingly, these instructions define the health institutions Hazard medical waste, infectious waste, chemical waste, pressurized gases cylinders waste, and other hazardous waste. These instructions also outline the integrated methodology and requirements to handle the medical wastes. Article No.15 from Instruction No.3 of 2011 define the locations of hazardous waste disposal sites and provides the specifications of the hazardous waste dumping site, location constraint, technical requirements, ground water level, lining requirements, and others. The Iraqi government developed a national solid waste management plan in 2007, the MOHE has taken extensive and quick effective measures from that time to better monitor and evaluate medical waste management and provide ongoing training to personnel responsible for waste management in the private and governmental health institutions including hospitals and health care centers.

9.7.1 Performance levels and/or standards

As a minimum standard of performance, all HCCs should abide by national laws and WHO guidance for the management of HCW. The Iraqi Instruction No.1 of 2015 is the national law of reference. The Safe Management of Wastes from Health Care Activities issued in 2014, Infection Prevention and Control at Healthcare Facilities (with a focus on settings with limited resources), issued in 2018 and the Water, Sanitation, Hygiene and Waste Management for SARS-CoV-2, the Virus that Causes COVID-19 Interim Guidance of 29 July 2020 are guiding reference of the WHO. The 29, July 2020 guidance states the following:

“Best practices for safely managing health-care waste should be followed, including assigning responsibility and sufficient human and material resources to segregate, recycle and dispose of waste safely. There is no evidence that direct, unprotected human contact during the handling of health-care waste has resulted in the transmission of the COVID-19 virus. Health care waste generated from facilities treating COVID-19 patients is no different than waste coming from facilities without COVID-19 patients. Additional treatment or disinfection beyond existing safe waste management recommendations are not needed”.

The majority of waste generated in health care facilities is general, non-infectious waste (e.g. packing, food waste, disposable hand drying towels). General waste should be segregated from infectious in clearly marked bins, bagged and tied, and disposed as general municipal waste. Infectious waste produced during patient care, including those with confirmed COVID-19 infection (e.g. sharps, bandages, pathological

waste) and should be collected safely in clearly marked lined containers and sharp boxes. This waste should be treated, preferably on-site, and then safely disposed. Preferred treatment options are high temperature, dual chamber incineration or autoclaving. If waste is moved off-site, it is critical to understand where and how it will be treated and disposed. Waste generated in waiting areas of health-care facilities can be classified as non-hazardous and should be disposed in strong black bags and closed completely before collection and disposal by municipal waste services All those who handle health-care waste should wear appropriate PPE (long-sleeved gown, heavy-duty gloves, boots, mask, and goggles or a face shield) and perform hand hygiene after removing it.

Many cities report a large increase (5 times greater than before the pandemic) of medical waste generated in hospitals, especially through the use of PPE. (You S SC, Sik Ok, S. COVID-19's unsustainable waste management. Science. 2020;368(6498).) Therefore, it is important to increase capacity to handle and treat this health-care waste without delay. Additional waste treatment capacity, preferably through alternative treatment technologies, such as autoclaving or high temperature burn incinerators, may need to be procured and systems may need to be put in place to ensure their sustained operation. Ideally safe waste disposal is linked to purchasing and investments in PPE. Manual chemical disinfection of waste is not recommended, as it is not regarded as a reliable and efficient method. In addition, countries should work to establish sustainable waste management chains, including addressing logistics, recycling, treatment technologies and policies".

9.8 Management Measures

Vaccination outlets should follow the recommendation below for the management of medical waste:

1. Waste minimization, reuse and recycling: HCF should consider practices and procedures to minimize waste generation, without sacrificing patient hygiene and safety considerations.
2. 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.
3. 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.
4. 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.
5. 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. The project will finance the installation of healthcare waste treatment facilities where needed. Good design, operational

practices and internationally adopted emission standards for healthcare waste incinerators can be found in pertaining EHS Guidelines and GIIP. Installation of incinerators, might require some wiring works.

6. Transportation and disposal at offsite waste management facilities: The medical waste management in health institutions in Iraq rely on using one of two approaches. Some facilities are equipped with medical incinerator of appropriate capacity according to quantity of MW generated, others are equipped with autoclave shredders. After handling on site, the residues from incinerators and the autoclaved shredder waste are transported off site to be dumped in the designated sanitary landfill specified by the local municipality. Subcomponent 1.2 will support procurement of equipment for health care waste management for the vaccinated centres that lack equipment to handle medical waste as per MOHE request.
7. Wastewater treatment: There is no evidence to date that the COVID-19 virus has been transmitted via sewerage systems with or without wastewater treatment[1]. According to MoHE all the HCCs institutions that will receive funds from this operation are connected to a municipal wastewater network as a pre-requisite condition to get their construction permit. As part of an integrated public health policy, wastewater carried in sewerage systems should be treated in well-designed and well-managed centralized wastewater treatment plants. Each stage of treatment (as well as retention time and dilution) results in a further reduction of the potential risk. Regarding WWTPs workers, there is no evidence to suggest that additional, COVID 19-specific protections are needed. Furthermore, there is no evidence that sewage or wastewater treatment workers contracted severe acute respiratory syndrome (SARS), which is caused by another type of coronavirus that caused a large outbreak of acute respiratory illness in 2003. Wastewater treatment plant operations, should continue to follow routine practices that prevent exposure to wastewater, including using the engineering and administrative controls, safe work practices, and PPE normally required for work tasks when handling untreated wastewater[2]

[1]WHO-UNICEF, Water, sanitation, hygiene and waste management for the COVID-19 virus, Technical brief, dated March 3, 2020.

[2]Ref.: Centers for Disease Control and Prevention -https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html

9.8.1 Generic Health Care Waste Management Plan adapted from WHO for reference in case of need

This generic plan can be adopted by the different HCFs or used as a checklist for upgrading health care waste management.

1.1 Introduction

Healthcare waste can cause health and environmental hazards. Consequently, health care facilities are required to have and should be implementing a health care waste management plan

(HCWMP). The HCWMP should consider waste from production, to handling and finally treatment.

Adequate financial and human resources should be allocated to the WMP in addition to the comprehensive training of relevant staff on its implementation.

1.2 The Development of the Healthcare Waste Management Plan

The development of the HCWMP starts with the allocation of responsibilities for its management to a person or group of person, understanding the waste generated at the facility, taking necessary steps to properly segregate waste, determining safe waste conveyance routing, properly storing the waste, and finally making sure waste is treated properly or disposed of, to operators who can safely treat it. The plan must comply with national legislation.

1.2.1 Allocate responsibilities

The first step in a HCWMP is putting a person or a group of persons in charge of the plan.

→ IN HCCs, assign a senior staff member heading a committee to oversee the implementation of the WMP.

Suggestively, the waste management committee can comprise the following key personnel. In small hospitals, one person can fulfill more than one set of responsibilities.[20]

- The Head of the Hospital
- Heads of Departments
- Chief Pharmacist
- Senior Nursing Officer
- Hospital Manager
- Hospital Bio-Medical Engineer
- Financial Manager
- Environmental and Health Officer or Waste Management Officer (if not assigned, then assign)

Table 3 Summary of the responsibilities of each key personnel.

Key Personnel	Responsibilities in Waste Management
Head of the Hospital	▪ Assigns the waste management committee and define responsibilities of each member of the team
	▪ Steers and approves the WMP
	▪ Calls for recurrent meetings to evaluate and improve the WMP
	▪ Allocates funds and resources as necessary
	▪ Supervises the implementation of the WMP

[20] Safe management of wastes from health-care activities, edited by Y. Chartier et al., 2nd edition, WHO 2014

	▪ Ensures staff are trained regularly
Heads of Departments	▪ Ensure all staff in the department are aware of the waste handling procedures and implement them.
	▪ Respond to requests and claims made by the E&H / Waste officer
	▪ Ensure staff in the department are well trained in waste handling procedures
Chief Pharmacist	▪ Safe management of pharmaceutical store in order to minimize waste
	▪ Advises and monitors the appropriate treatment and disposal of Pharmaceutical waste
	▪ Ensures personnel involved in waste handling, treatment and disposal is well trained
Senior Nursing Officer and Hospital Manager	▪ Responsible for training (induction, training and refresher training), nursing staff (medical assistants, hospital attendants and ancillary staff) in the correct procedures for segregation, sealing, storage, transport and disposal of waste.
	▪ Advises on and monitors high standards of infection control
Hospital Bio-medical Engineer	▪ Responsible for installing and maintaining waste-storage facilities and handling equipment that comply with the national laws and regulations
	▪ Ensures adequate operation and maintenance on waste treatment equipment
	▪ Trains staff operating the waste treatment facilities
Financial Manager	▪ Makes sure funds are available for the continuous supply of items needed in the waste management.
Waste Management Officer	▪ Responsible for the daily operation and monitoring of the waste-management system
	▪ Has direct access to all members of the hospital staff, reporting to the head of the hospital
	▪ Controls and supervises collection, transport, storage of the waste on daily basis

	▪ Makes sure supplies of bags, containers for HC solid waste, protective clothing and trolleys are convenient and available
	▪ Ensures that staff replace bags and HC containers when ¾ full, adequately
	▪ Coordinates waste disposal operations
	▪ Ensures that waste is not stored for longer time than acceptable and collected at required frequency
	▪ Organizes staff training and refresher trainings for nursing staff, medical assistant, hospital attendants, ancillary staff, doctors, clinical staff , waste handlers to make sure each member is aware of his own responsibilities
	▪ Ensures compliance with occupational health and safety measures
	▪ Prepares emergency plan and procedures for HC waste management
	▪ Investigates and reports incidents concerning HC waste

1.2.2 Survey and evaluate existing waste management practices

The survey should include site observations and interviews at all the levels from front-line workers, support staff, physicians and managers. The survey should result in the creation of a status report. The report will help in identifying the different departments that are producing wastes and will lead to the categorization and the quantification of the different types of wastes generated. This information will facilitate the estimation of the number and the capacity of waste containers and the storage rooms, the collection and transportation frequency.

The survey can make use of the Individualized Rapid Assessment Tool (I-RAT) that was developed in 2009 as part of the UNDP GEF Global Project on Healthcare Waste. The I-RAT is based on WHO's Rapid Assessment Tool (RAT), which is part of WHO's overall strategy to reduce the disease burden caused by poor healthcare waste management (HCWM) through the promotion of best practices and the development of safety standards. Unlike the RAT which evaluates the HCWM situation on a national level, the UNDP GEF Project's I-RAT is intended for use at the individual healthcare facility level[21]. A pdf version of the excel tool can be found in Annex D. The survey comprises the following information:

[21] www.undp.org.lb/announcement/Application_form accessed on 31-08-2018

→ Collect information about existing waste-management arrangements

- ✓ General Information:
  - Medical services provided
  - Number of patients treated
  - Total number of beds
  - Average rate of occupation
- ✓ Waste management practices in HCC premises (written policy for healthcare waste management)
- ✓ Types and Quantities of waste generated per department per category and per day (in volume and weight) and systems for waste separation and containers type. Sample of checklist to be filled in each department is provided below.

Waste type	Volume/week (m3) and/or weight (kg)	Collection system/frequency	Transport	Final disposal
Infectious waste				
Sharps & cutting				
Bottles / glass				
Anatomical parts of the body				
Waste assimilated to household waste				
Perforated, sharp or cutting cytotoxic waste				
Soft cytotoxic waste				
Pharmaceutical and chemical waste				
Radioactive waste				
Other waste				

- ✓ Any available documentation that could help in tracking the wastes
- ✓ Practices for reducing wastes
- ✓ Practices of reuse and possibilities of recycling
- ✓ Practices of transportation of wastes within the HC premises
- ✓ Storage practices, location, volume and equipment of the storage rooms (wastewater disposal, temperature control)
- ✓ Waste disposal: onsite or offsite (contract with waste management companies)
- ✓ Waste related equipment available and needed (no, status)
    - Care trolleys
    - Waste bins for wastes assimilated to household waste
    - Waste bins for IHCW
    - Waste trolleys for "General waste" or "Non-hazardous waste" (black), clearly labelled
    - Waste trolleys for "Infectious waste" (Yellow), clearly labelled
    - Boxes for "other hazardous waste" such as chemical and pharmaceutical wastes
- ✓ Personnel involved
    - Number and qualifications (physicians, nurses, cleaning staff, etc.)
    - Skills
    - Person/Committee in charge of waste management
- ✓ Training of staff, and identification of the need for training
- ✓ Level of health protection of staff during segregation, collection, transportation, storage and disposal.
- ✓ Cost of waste management (capital, operation and maintenance costs)
- ✓ Monitoring practices and identification of the need for additional monitoring

→ Evaluate waste management arrangements vis-a-vis the national legislations

The results of the waste management survey and recommendations of each member of the Health committee will be evaluated by the waste management officer in the light of existing legislations.

The findings shall be summarized in a status report and major gaps and deviations from regulations and good practice identified. Based on the status report, the PMU will determine the needs of the facility for a full implementation of the HCWMP. The need could be for a complete HCWMP or for filling gaps in a partial existing plan.

Based on the assessment of the facility, a draft waste management plan will be prepared by the waste management officer and discussed with the Health Committee members. The draft plan will be submitted to the PMU for approval.

1.2.3 The health care waste management plan.

The key elements

- Allocate resources and assign responsibilities;
- Promote the reduction of the wastes generated
- Ensure proper waste segregation;

- Select safe and environmentally-friendly management options, to protect people from hazards when collecting, handling, storing, transporting, treating or disposing of waste.
- Secure an environmentally safe treatment of hazardous health care wastes; and
- Raise awareness of the risks related to health-care waste and of safe practices;
  At minimum, the waste management plan shall comprise the following information:
  Introduction
  Describe the planned services of the hospitals/PHCCs and the types of medical waste expected to incur.
  Regulatory Framework and Technical Standards

  Following are details to include in a waste-management plan:

→ Establish an effective Segregation of Waste (as recommended by MoHE AND OR BY WHO)

✓ Segregate waste in designated color coded bags/containers and duly symbol-coded as provided in the following table.

Table 4 Color codes and symbols for waste in HCFs

Waste category	Color of container and marking	Container type
Healthcare waste assimilated to household waste: Non-hazardous or general waste: waste that does not pose any particular hazard such as paper, packaging, food residues, dried flowers, tissues, materials not contaminated with body fluids	Black	Plastic bags
IHCW, sharp or cutting: Syringes, needles, disposable cutting instruments, razor blades, scalpel blades	Yellow with appropriate symbol	Plastic containers for sharp and cutting waste
IHCW Soft (no sharp , no cutting): waste contaminated with blood, bodily fluids, cultures and stocks of infectious agents from laboratory work, waste from patients with infections	Yellow with appropriate symbol	Plastic bag
Anatomical parts of the body: human tissues, organs or fluids and body parts;	Grey with appropriate symbol	Plastic bags or boxes
Perforated, sharp or cutting cytotoxic waste: waste containing substances with genotoxic properties (i.e. highly hazardous substances that are, mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment;	Purple with appropriate symbol	Sharp containers
Soft cytotoxic waste: waste containing substances with genotoxic properties (i.e. highly hazardous substances that are, mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment;	Purple with appropriate symbol	Plastic bag
Pharmaceutical and chemical waste: expired, unused and contaminated drugs and vaccines	Red with appropriate symbol	Plastic bag

Radioactive waste	Red with appropriate symbol	Plastic bag

- ✓ Assign specific disinfected bins for potentially infectious wastes
- ✓ Include drawings of the establishment showing designated bag (health-care waste or other waste) or disposal container for every department in the hospital or section of the HCC;
- ✓ Include drawings showing the type of bag holder to be used in the departments or section.
- ✓ Include drawings of sharps containers, with their specification.

→ Collection

- ✓ Establish routes for infected waste capable of reducing transmission of infections, including elevators.
- ✓ Include drawings showing the paths of waste-collection trolleys through the hospital or HCC, with clearly marked individual collection routes.
- ✓ Include drawings showing the type of trolley or wheeled container to be used for bags collection. Internal transport to a central storage area should be done in separate trolleys. For instance, yellow and black bags should not be carried in the same trolley. The trolley should be closed with a lid. Bags should not be hand-carried around the health facility.
- ✓ Establish a fixed collection schedule. The collection shall be in a separate schedule, route and collection time for each type of waste to prevent any mishandling and timely collection. The minimum frequency is once a day. The schedule shall include a collection timetable for each trolley route, the type of waste to be collected, and the number of departments or sections to be visited on one round. The central storage point in the facility for that particular waste should be identified.
- ✓ Set a procedure to make sure all bags leaving are sealed and labelled to allow people in charge to trace any waste bag to its source if a problem is found. It also allows to quantify the waste produced in each department.

→ Temporary storage

- ✓ Establish the use of rigid 2-wheeled containers for temporary storage. This is to avoid filled waste bags being piled on the floor. The temporary storage should be located away from patient's areas.

→ Central Storage

- ✓ Establish drawings showing the central storage site for health-care waste and the separate site for other waste (the 2 types of central storages should be geographically separate). Make sure the central storage containers for black bags are clearly marked "for general waste only" and similarly, for yellow bags marked "for infectious waste only".
- ✓ Provide details of the type of containers, safety equipment, and arrangements for washing and disinfecting waste-collection trolleys (or other transport devices).

- ✓ Address eventual needs for refrigerated storage facilities and drainage. The storage time should be short. All waste should be disposed of within 24 hours.

→ Disposal
- ✓ Establish clear plans for the disposal of different types of wastes.

→ Personnel Protection
- ✓ Ensure personnel is well informed
- ✓ Ensure personnel (including healthcare, medical, paramedical, cleaning, collection) wear protective equipment
- ✓ Ensure waste workers are duly immunized
- ✓ Establish a training for personnel protection
- ✓ Establish a plan for the provision of protective equipment (gloves, masks, safety shoes, ….)

→ Responsibilities
- ✓ Define the responsibilities, duties and codes of practice for each of the different categories of personnel of the hospital who, through their daily work, will generate waste and be involved in the segregation, storage and handling of the waste.
- ✓ Define the responsibilities of hospital attendants and ancillary staff in collecting and handling wastes, for each area and department; where special practices are required (e.g. for radioactive waste or hazardous chemical waste), the stage at which attendants or ancillary staff become involved in waste handling shall be clearly defined.
- ✓ Set diagrams of the waste management structure and the connection between different managers and staff include their names and their telephone numbers.
- ✓ Provide names and phone numbers of persons to be contacted in case of emergency.

→ Procedures and practices
- ✓ Produce simple diagram (flowchart) showing procedure for waste segregation.
- ✓ Outline of monitoring procedures for waste categories and their destination.

→ Training
- ✓ Describe the training courses and programs to be set up and the personnel who should participate in each.
    - Training on healthcare management (managers, health professionals, waste workers)
    - Training on relevant national laws and regulations
    - Training on segregation
    - Training on collection
    - Training on the use of personal protection equipment
- ✓ Establish that new members of staff should be trained
- ✓ Establish a training program that includes reminder training, short refresher courses, workshops, …

→ Emergency Response

✓ Contingency plan, containing instructions on storage or evacuation of health-care waste in case of breakdown of the treatment unit or during closure for planned maintenance, in the event of a natural disaster, spill, treatment system break down, power failure, etc. This plan is to be followed to ensure the proper disposal of medical waste.

→ Monitoring and Evaluation

✓ Establish record keeping, tracking and traceability

✓ Establish a schedule for the implementation of the tasks showing dates and resources and the date when the waste management plan is officially put into practice.

✓ Establish an implementation strategy

✓ Set follow up and weekly auditing plans with corrective measures in case of non-conformity.

→ Cost for required material and human resources

✓ Estimate the number and cost of bag holders and collection trolleys.

✓ Estimate the number of sharps containers and health-care waste drum containers required annually, categorized into different sizes, if appropriate.

✓ Estimate the number and cost of color-coded bags or bins to be used annually.

✓ Estimate the number of personnel required for waste collection and the relevant cost.

✓ Estimate the cost for the implementation of the waste management Plan including investment cost (containers, storage location) and operational cost (fuel, electricity, maintenance, salaries of staff in charge of the healthcare waste management and collection, sharp boxes, …)

1.2.4 Revisions and updated of the WMP

When full agreement is reached between all members of the waste management committee, the revised WMP document is signed and designated as the official HC Institution WMP. The allocated person for implementation of WMP/ the waste management committee shall review, at least on yearly basis, the WMP and suggest its revision if needed especially if new legislation is in place.

9.9 Emergency Preparedness and Response (EPR)

The purpose of the EPR is to identify potential risks and hazards that might occur during project implementation. The risks can be minimized, and a response plan developed to respond to an eventual risk.

The main risks in this project are

Operational health and safety and mainly infection with COVID 19	See above section on OHS compliance procedures
Side effect from vaccination that occurs in the HCC or at home	See section on AEFI
Spillage of vaccine or diluent from an accidental fall of the vial	Reduce number of vaccine and diluent vials in the outlet to needed number per people to be vaccinated as per the appointment registry Procedures for vaccine spillage management as per NHS UK ***1. Procedure – Spillages on skin/eyes*** *1.1. Staff must be aware of location of handwashing facilities and eyewash kits.* *1.2. Spillages on skin should be washed with soap and water.* *1.3. If a vaccine is splashed in the eyes, they should be washed with sterile 0.9% sodium chloride solution and medical advice should be sought.* ***2. Procedure – Spillages on surfaces*** *The Pfizer-BioNTech COVID-19 (BNT162b2) is not supplied with a Material Safety Data Sheet and the manufacturer reports that there are no special COSHH handling requirements for either routine handling or dealing with spillages.*

	2.1. Spillages must be cleared up quickly and gloves should be worn. *2.2. The spillage should be soaked up with paper towels, taking care to avoid skin puncture from glass or needles.* *2.3. The area should be cleaned according to the local chemical disinfection policy.* *2.4. Gloves, towels, etc. should be sent for incineration.*
Power short in vaccination outlet	Make a UPS systems available Install extra power outlets in the vaccination and admin rooms Have qualified technicians present on site for quick repairs
Power failure that might affect vaccine storage temperature	Make power backup generator available Have qualified technicians present on site for quick repairs
Bad transport conditions that might cause vaccines to become defective	Check vaccines on delivery as instructed above and dispose of properly if defective Train transporters on proper transport conditions and requirements Reduce transported quantities and limit them to daily needs
Failure of waste treatment system	Ensure there is a proper storage facility for at least 24 hours

	Have qualified technicians present on site for quick repairs Make plans to transport waste to another facility within 24 hours
General hazards such as fire, explosives, etc.	Develop a fire alarm and evacuation plan and post clearly on site Train staff on fire evacuation Inspect possible fire hazard locations repeatedly Have a firefighting system in place as per national and international requirements Have contacts of fire department ready with designated people and posted in several locations

9.10 Institutional Arrangement and Capacity Building.

The recommendations below along with the aforementioned GOI Instruction No.1 2015 and the generic waste management plan can be either used to develop the HWMP for each HCC or verify the compliance of an existing HWMP against national laws and international standards. As for the institutional structure in charge of HWMP implementation, the following recommendations should apply:

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:

- Defined 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.

The GOI COVID-19 Waste Management Plan states the following as regards to training:

Objectives of training

- Raising health awareness for all staff working in hospitals and how to safely deal with medical waste.
- Trainees acquire the required information, skills and experience
- Develop the trainees' capabilities so that they can perform their tasks and achieve their goals efficiently and effectively
- Activating the role of training as one of the important axes for implementing infection control programs

The training includes the following topics:

- Definition of medical waste produced from the vaccination process
- Medical waste management
- Putting on and taking off personal protective equipment
- Hand hygiene
- Dealing with spills
- Cleaning, disinfection and sterilization

9.11 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.

As per Iraqi law, the Health Department and the Ministry make special schedules to visit the vaccine distribution centers for monitoring and evaluation. The infection control officer in each vaccine distribution center:

1. submits a daily report to the administration on the reality of managing the waste produced from the immunization process
2. Follows-up on the implementation of the employees for the procedures and their commitment to the following:
    i. Use of protective equipment and protective clothing
    ii. Implementation of personal safety rules
    iii. Protection from injuries and accidents

Table 5 ICWMP Checklist

This table should be filled for all HCFs participating in the project

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;	Emergency response plan			

	- 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				
Operation of acquired assets for holding potential COVID-19 patients					
To be expanded					

10 Annex II Labor Management Procedures

10.1 Introduction

ESS2 on Labor and Working Conditions is relevant to the project. Consequently, Borrowers are required to develop labor management procedures (LMP). The purpose of the LMP is to facilitate planning and implementation of the project. The LMP identifies the main labor requirements and risks associated with the project and help the Borrower to determine the resources necessary to address project labor issues. The LMP is a living document, which is initiated early in project preparation, and is reviewed and updated throughout development and implementation of the project. The MOHE is the agency in charge of implementing the project including the LMP. The TPMA is in charge of monitoring and reporting on the implementation of the LMP.

The objectives of ESS2 include the following:

- To promote safety and health at work
- To promote the fair treatment, non-discrimination and equal opportunity of project workers
- To protect project workers, including vulnerable workers such as women, persons with disabilities, migrant workers, contracted workers, community workers and primary supply workers, as appropriate
- To prevent the use of all forms of forced labour and child labour.
- To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law; and
- To provide project workers with accessible means to raise workplace concerns.

10.2 Overview of Labor Use in the Project

10.2.1 Background

As of September 2, 2021, the number of vaccination outlets under the project is 1301. The number of vaccination units in each outlet has been estimated to an average of three. As the LMP is a living document, updates and refinements can be introduced all along the project implementation timeline.

The project involves three categories of workers

1. Direct workers (PMU, consultants, health workers although not paid by the project)
2. Contracted workers (electricians when required, waste management workers when relevant, software development workers)
3. Primary supply workers (vaccine and medical supplies workers, autoclave suppliers)

10.2.1.1 Direct Workers:

Direct workers in this project are heath care workers, members of the PMU and consultants hired by the project.

10.2.1.2 Health workers

Health workers are listed under direct workers although not paid by the project and mostly civil servants with existing public sector employment contracts except possibly for waste management workers who could be, in some cases, contracted workers. Their working conditions are governed by ESS2 (para 8)

"Where government civil servants are working in connection with the project, whether full time or part time, they will remain subject to the terms and conditions of their existing public sector employment agreement or arrangement, unless there has been an effective legal transfer of their employment or engagement to the project.8 ESS2 will not apply to such government civil servants, except for the provisions of paragraphs 17 to 19 (Protecting the Work Force) and paragraphs 24 to 30 (Occupational Health and Safety)".

The number of health workers from all levels is estimated currently to be around 32,500 based on 1301 vaccination sites. The specific required specialties are based on the NVDP.

Health workers are already operational in vaccination outlets and will stay on beyond the lifetime of the project.

Waste management workers who are civil servants are included under this same category.

Table 6 Details on healthcare workers

Specialty	Responsibility	Number	Total for the 1301 sites
Medical Team	Health and eligibility check		
Medical Doctor		1	1301
Vaccine Liaison Officer		1	1301
Nurses		2	2602
Administrator/Data entry		1	1301
Vaccination Team	Vaccination		
Pharmacists		1	1301

Vaccinator		5	6505
Administrator		1	1301
Cold Chain Team	Vaccine stock management		
Pharmacist		2	2602
Assistant Pharmacists		2	2602
Supervision Team	Vaccination implementation monitoring		
HCC Director or Technical Assistant		1	1301
Public Health Unit Director		1	1301
Press coordinator		1	1301
Administrator		1	1301
Cleaning Team	Cleaning the vaccination outlets and collecting waste		
Estimated number of Workers		5	6505
	TOTAL STAFF FOR VACCINATION SITES		**32,525**

10.2.1.2.1 The PMU

The PMU is composed by a director, procurement team, financial team, Monitoring and Evaluation team, Environment and Social Affairs team, communication officer, GM officer. Additional staff might be required to ensure proper and timely project implementation. Terms and conditions of PMU staff, including their rights related to hours of work, wages, overtime, compensation and benefits, are governed by the Iraqi Labor Law and the relevant provisions of ESS2.

All PMU staff members are civil servants at MOHE and consequently, the provision of ESS2 for civil servants apply.

The PMU workers will mostly be professionals of Iraqi nationality over the age of 18 and would be mix of males and females.

The PMU will be operational from the beginning to the end of the project.

10.2.1.2.2 Consultants

The Project might require the support of consultants for the upgrade of the electronic registration system, communication campaign on an as needed basis. These consultants will hired directly by the PMU under WB contractual conditions. It is yet unknown if the consultants will be direct workers or workers of primary suppliers. The nationality, number and gender mix of consultants are still unknown. All consultants will be above 18 years old. Relevant Iraqi labor laws and ESS2 requirements will apply. The timing of labor cannot be determined at the present as it will be on an as needed basis. The TPMA staff might be included under this category if directly hired by the PMU and not through a service provider.

10.2.1.3 Contracted Workers:

10.2.1.3.1 Electricians

The proposed Project will finance the purchase of waste management equipment for HCFs (autoclave shredders). This equipment might need minor electrical wiring to become functional. The installation works will be done by local contractors who will be responsible for recruiting their own workers (typically small work crews of 1-4 workers) for the execution of electrical wiring works. These workers may be hired on a casual or temporary basis. The labor terms and conditions, including their rights related to hours of work, wages, overtime, compensation and benefits, are governed by the Iraqi Labor Law and this LMP.

The electrical works are minor and will not result in labor influx. All workers will over the age of 18. Bidding documents will include provision to protect from under 18 labor and to ensure enforcement of Iraqi Labor Law and the provisions of this LMP.

The timing of labor requirements cannot be determined from now as a needs assessment for waste management equipment and their works requirements has not been done yet.

10.2.1.3.2 Waste management workers contracted through service providers

Waste management workers could be public servant employed by HCCs are aforementioned or supplied by waste management service providers.

The number, nationality, gender mix of all workers of service providers cannot be known at the moment. No workers under age 18 will be hired. The provisions of the Iraqi Labor Law, ESS2, and WB contractual conditions will apply as relevant.

The timing labor will be all along the project lifetime as these workers might be working prior to and after the end of the project.

10.2.1.3.3 Workers of other Service Providers:

Workers of service providers could be consultants and trainers provided through contracted consulting firms and members of the TPMA.

The number, nationality, gender mix of all workers of service providers cannot be known at the moment. No workers under age 18 will be hired. The provisions of the Iraqi Labor Law, ESS2, and WB contractual conditions will apply as relevant.

The number and timing of labor requirements is also unknown. The provisions of this LMP should be included in contractual documents.

10.2.1.4 Primary Supply Workers

Primary supply workers are employees of companies that supply vaccines, medical supplies and equipment and waste management equipment. Workers in charge of transport of vaccines are included under Primary Supply Workers.

Primary supply workers are mostly Iraqi nationals above 18 years of age. Some of the workers might be of other nationalities depending on the primary suppliers international affiliations. They mainly do office work to manage the provision of supplies and equipment and workers in charge of vaccine transport. The number, gender mix and nationality of primary supply workers, is still unknown.

10.3 ASSESSMENT OF KEY POTENTIAL LABOR RISKS

10.3.1 Project activities:

Component 1: COVID-19 Vaccines and Deployment ($97 million).

The component will retroactively support the purchase of COVID-19 vaccines and related deployment activities.

Sub-component 1.1: COVID-19 Vaccine Support ($72 million). This subcomponent will retroactively support the purchase of approximately 6 million doses of the COVID-19 vaccines that meet the World Bank's VAC. This is expected to cover 3 million individuals or approximately 7 percent of the population in Iraq.

Sub-component 1.2: Support for Deployment of COVID-19 Vaccines ($25million). This sub-component will support system strengthening to successfully deliver COVID-19 vaccines at scale. This will include,

inter alia, (i) procurement of equipment for health care waste management, (ii) support for refining the electronic registration system for vaccination, (iii) vaccine logistics and supply chain management; (iv) communication initiatives to address vaccine hesitancy, (v) monitoring and management of adverse effects following immunization (AEFI), and (vi) any other necessary technical assistance and non-salary operating costs for vaccine rollout. The project will prioritize supporting Iraq to address the key gaps identified by the readiness assessment, in close coordination with WHO, UNICEF and other development partners.

Component 2: Project Management and Monitoring and Evaluation (M&E) (US$3 million IBRD and Trust Fund). This component will support the coordination, implementation, and management of project activities, including third party monitoring.

Sub-component 2.1. Project Management and M&E (US$1 million IBRD) will support the coordination, implementation, and management of project activities.

Sub-component 2.2. Third Party Monitoring (US$ 2 million Trust Fund). A third-party monitoring agency (TPMA) will be contracted by the MOHE using grant financing from I3RF.

10.3.2 Key Labor Risks:

The main risk to workers in this project is occupational health and safety, especially COVID-19 infection and risk of electrocution from minor electrical works to connect waste management equipment.

10.3.3 Brief Overview of Labor Legislation: Terms and Conditions

The terms and conditions of employment applying to workers in this Project will largely depend on the nature of their employment contracts and shall be governed by the Iraqi Labour Law. These terms and conditions will be clearly mentioned in the written contracts for all types of workers, whether full-time or part-time, and be made known to project workers prior to commencement of work.

The essential provisions of Iraqi Labour Law are embodied in **Law No. 37 of 2015**, which aims to regulate the work relationship between the workers and employers and their associations, in order to protect their rights and achieve sustainable development based on social justice and equity and secure decent work for all. The Social Security Law (**Law No. 39/1971**) contains further provisions relevant to the employer employee relationship.

10.3.3.1 Wages

As per the Iraqi Labor Law, the wages of employees are calculated based on the amount of work performed or the amount of time the employee has put in or on some other criteria. Wages paid shall be no less than the amount specified in employment contracts or standard salaries agreed upon in collective labour contracts. In Iraq, the minimum wage for contracted workers is about 293.29 USD. The employer

shall be subject to a penalty of not less than twice the legally prescribed minimum wage if it violates the Labour Law's provisions governing the minimum wage.

10.3.3.2 Working hours

As per the Iraqi Labour Law:

- The standard work week is 40 hours.
- The maximum working hours are 48 hours per week.
- The minimum rest duration per week is 24 hours.
- If the worker is a contracted worker, he/she will receive full payment by the end of the month despite national holidays (i.e. national holidays will be paid). However, there is no compensation for national holidays with respect to daily wages in both the public and private sector.
- As a result of COVID-19, working hours may be reduced, subject to local authorities.

10.3.3.3 Rest breaks

As per the Iraqi Labour Law, the employees must be granted a rest and meal break during the workday. Time and duration are regulated by the Iraqi Labour Law at 30 to 60 minutes per day.

10.3.3.4 Leaves

As per the Iraqi Labour Law:

- Ordinary leave: An employee will have the right to take a paid leave up to the equivalent of 3 calendar days per month regardless of his/her position, terms of employment or the effective period of their employment contract. The duration may vary depending on the type of workers, causes and reasons.
- Sick leave: For every year of work, the worker is entitled to thirty days' sick leave period paid by the employer. The sick leave period to which a worker is entitled may be accumulated for a total of up to 180 days.
- Maternity/Paternity leave: A female worker is entitled to a maternity leave at full pay of not less than 14 weeks per year.

10.3.3.5 Overtime work

As per the Iraqi Labour Law, no worker shall be employed for more than 40 hours of overtime for 90 days, and 120 hours of overtime for 12 months. Wages for every hour of overtime work shall be paid to employees as follows:

- If wages are based on time worked, the amount paid per hour shall not be less than twice the standard hourly wage;
- If wages are paid based on piece of work performed by the employee, extra wages must be paid in an amount not less than the hourly wages of employees with the same pay scale.

10.3.3.6 Discrimination and Non-Equal Opportunities

The Project shall:

- Issue procedures to assure that no employee or job applicant will be subject to discrimination and/or harassment.
- Practice a strict Code of Conduct in which harassment, violence or discrimination of any kind is not allowed. This includes discrimination based on any bias, including gender, age, disability, ethnicity, or religion.

10.4 Brief Overview of Labor Legislation: Occupational Health and Safety

Labour Law No.37 of 2015 and Ministerial Instruction No.12 of 2016: Occupational Health and Safety Requirements Regulations are the main OHS legislations. In addition to these laws, the following are additional legislation requirements on OHS.

Occupational Health and Safety Instructions No. 3/1985 Concerning Occupational Safety:

- Provides for the enforcement of occupational safety provisions at places of work.
- Regulates that all workplaces are to appoint a person in charge of occupational safety and an occupational safety committee.
- Provides for the appointment and duties of the person responsible for occupational safety and for the occupational safety committee at each workplace.
- Establishes the functions and duties of employers and employees with regard to occupational safety.

Law No. 6 of 1988 concerning the National Commission for Occupational Hygiene and Safety governs the enforcement of OHS regulations.

- Provides for inspections of places of employment and inspections reports.
- Establishes the duties and responsibilities of the employer's OHS.
- Establishes the functions of safety commissions at places of work.
- Regulates the responsibilities and duties of workers with respect to OHS.

Reference may also be made to applicable international conventions, and directives for addressing health and safety issues relevant to COVID-19, such as:

- ILO Occupational Safety and Health Convention, 1981 (No. 155)
- ILO Occupational Health Services Convention, 1985 (No. 161)
- ILO Safety and Health in Construction Convention, 1988 (No. 167)
- WHO International Health Regulations, 2005
- WHO Emergency Response Framework, 2017
- WHO SAGE Values Framework for the Allocation and Prioritization of COVID-19 Vaccination (Sept 2020)
- WHO SAGE Roadmap for Prioritizing Uses of COVID-19 Vaccines in the Context of Limited Supply (Nov 2020)
- WHO Target Product Profiles (TPP) for COVID-19 Vaccines (2020)
- EU OSH Framework Directive (Directive 89/391)

10.5 Responsible Staff

The PMU is in charge of the implementation of the LMP. The PMU is in charge of hiring direct workers, except civil servants, as per national labor laws and World Bank requirements. The MOHE is in charge of direct workers, civil servants working in HCFs. Finally primary suppliers are in charge of hiring their own staff.

All hiring on the project should take into consideration the provision of this LMP

The PMU in collaboration with MOHE and HCF staff should ensure training and awareness raising of all workers on the project on subject related to OHS, SEA/SH, GBV, GM, signature of Codes of Conduct.

The ESF specialists on the project and the TPMA will monitor the implementation of training and awareness raising and measures taken on site to raise the awareness of the general public on SEA/SH, GBV and GM. The ESF specialists and TPMA will also monitor the implementation of OHS requirements for HC workers and other workers involved in the project.

The ESF specialists in the PMU are also in charge of tracking grievances received under all GMs in the project, and do take necessary actions for their potential resolution. All grievances should be registered in a log preferably in the electronic registration system for vaccination. Grievances could be received by the hotline and escalated to the proper authorities. Labor related grievances can be registered at the HCFs and escalated as detailed in the labor GM.

10.6 Policies and Procedures

This section sets out information on OHS, reporting and monitoring and other general project policies. Where relevant, it identifies applicable national legislation.

The main risk to workers in this project is accidental infection with COVD-19 in the HCCs for staff and people to be vaccinated. PMU staff are also at risk during monitoring missions. Risk minimizations actions and guidelines have been outlined in the risk prevention section and in the ICWMP.

The PMU and project labor should adhere to Iraqi labor and OHS laws and regulations in parallel with World Bank requirements whichever is more stringent.

Other risks are related to discrimination, unfair treatment of workers, SEA/H, GBV, Child Labor, Incompetent labor, data sharing. All workers should sign Codes of Conduct cover above risks and be trained on above issues. The PMU should monitor and immediately remedy to any grievance related to the above through the GM

- For health workers rights, roles and responsibilities, including on OHS, consult WHO COVID-19 interim guidance
- For guidance on infection prevention and control (IPC) strategies for use when COVID-19 is suspected, consult WHO IPC interim guidance
- For rational use of PPE, consult WHO interim guidance on use of PPE for COVID-19
- For workplace-related advice, consult WHO guidance getting your workplace ready for COVID-19
- For guidance on water, sanitation and health care waste relevant to viruses, including COVID-19, consult WHO interim guidance
- For projects requiring management of medical waste, consult guidance issued by WHO Safe management of wastes from health-care activities
- For guidance on immunization and vaccine safety, consult WHO Immunization Safety guidance
- For guidance on implementation of mass vaccination campaigns in the context of COVID-19, consult WHO framework for decision-making

Further Guidance will be included in the Reference List available on the OPCS COVID-19 website.

OHS related measures:

- Obtaining adequate supplies of medical PPE, including gowns, aprons, curtains; medical masks and respirators (N95 or FFP2); gloves (medical, and heavy duty for cleaners); eye protection (goggles or face screens); hand washing soap and sanitizer; and effective cleaning equipment. Where relevant PPE cannot be obtained, the plan should consider viable alternatives, such as cloth masks, alcohol-based cleansers, hot water for cleaning and extra handwashing facilities, until such time as the supplies are available
- Training medical staff on the latest WHO advice and recommendations on the specifics of COVID-19, and principles on fair, equitable and inclusive access and allocation of Project benefits, including vaccines
- Training medical staff on the priority groups for allocation of vaccines and the timetable for these groups, as well as why they are required to only vaccinate persons from the particular priority group at the particular time (for example, because that group is at higher risk, for reasons of inclusion and equity etc where there is limited supply of vaccines)
- For vaccination sites, ensuring that the space is organized in a safe and socially distant manner, and necessary logistical controls and waste management are planned for in advance
- For the deployment and use of vaccines, safe cold-chain practices, checking that vaccines are approved for use by WHO or another regulatory authority agreed by the Bank, selecting safe injection equipment, immunization practices for vulnerable people such as pregnant women or children under 5, immunization waste-disposal plan, supervision and reporting on implementation of immunization practices as required under national legislation
- Conducting enhanced cleaning arrangements, including thorough cleaning (using adequate disinfectant) of latrines/toilets/showers, common areas, including door handles, floors and all surfaces that are touched regularly
- Maintaining appropriate working hours with breaks;
- Consulting with health workers on occupational safety and health aspects of their work, and notifythe labor inspectorate of cases of occupational diseases;
- Allowing health workers to exercise the right to remove themselves from a work situation that they have reasonable justification to believe presents an imminent and serious danger to their life or health, and protect health workers exercising this right from any undue consequences;
- Not requiring health workers to return to a work situation where there has been a serious danger to life or health until any necessary remedial action has been taken;
- Honoring the right to compensation, rehabilitation, and curative services for health workers infected with COVID-19 following exposure in the workplace – considered as an occupationaldisease arising from occupational exposure;
- Providing access to mental health and counselling resources; and
- Enabling cooperation between management and health workers and their representatives.

Considering the project may support minor electrical , the project will adopt the following procedures based on the World Bank's Interim Note: COVID-19 Considerations in Construction/Civil Works Projects, specifically Section 5 (a) which discusses assessing the

workforce characteristics, assessing the different aspects (their country of origin, the terms and conditions of their employment, etc.) . The contractor will:

- Assess the characteristics of the workforce, including those with underlying health issues or who may be otherwise at risk
- Confirm workers are fit for work, to include temperature testing and refusing entry to sick workers
- Consider ways to minimize entry/exit to site or the workplace, and limit contact between workers and the community/general public
- Train workers on hygiene and other preventative measures, and implementing a communication strategy for regular updates on COVID-19 related issues and the status of affected workers
- Assess risks to continuity of supplies of medicine, water, fuel, food and PPE, taking into account international, national and local supply chains
- Consider adjustments to work practices, to reduce the number of workers and increase social distancing
- Establish a procedure to follow if a worker becomes sick (following WHO guidelines)
- Implement a communication strategy with the community, community leaders and local government in relation to COVID-19 issues on the site.

- In case migrant workers are included within the Contractor's labor force, the following procedures could be taken:
- The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations (e.g. 4 weeks on, 4 weeks off).
- This should include a breakdown of workers who reside at home (i.e. workers from the community), workers who lodge within the local community and workers in on-site accommodation. Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk.

10.7 Age of Employment

The Iraqi Labor Law No. 37 for 2015 Article 21 defines the child as anyone who has not completed 15 years old. However, Iraq is also signatory to the 1989 International Convention on the Rights of the Child, which defines everyone under the age of 18 as a child who must have special protection and care. Considering the type of work in the Project, **the minimum age for employment will be 18**. If a child under the minimum age is discovered working on the Project, measures will be taken to immediately terminate the employment or engagement of the child in a responsible manner, taking into account the best interest of the child.

In order to prevent under-aged workers, the PMUs will be required to maintain a labor registry of all contracted workers, as well as verify the identity and age of all workers. This will require workers to provide official documentation, which could include a national identification card, passport, or medical or school record.

10.8 Terms and Conditions

Note: This section does not apply to civil servants

10.8.1 Maximum Number of Hours that can be Worked on the Project

The standard work week shall be 40 hours and the maximum working hours are 48 hours per week. The minimum rest duration shall be 24 hours per week. If the worker is a contracted worker, he/she will receive full payment by the end of the month despite national holidays (i.e. national holidays will be paid). However, there is no compensation for national holidays with respect to daily wages in both the public and private sector. As a result of COVID-19, working hours may be reduced, subject to local authorities.

10.8.2 Provisions on Termination

Project workers will receive written terms and conditions for work including written notice of termination of employment and details of severance payments in a timely manner. All wages that have been earned, social security benefits, pension contributions and any other entitlements will be paid on or before termination of the working relationship, either directly to the Project workers or where appropriate, for the benefit of the Project workers. Where payments are made for the benefit of project workers, project workers will be provided with evidence of such payments.

10.8.3 Leave

The following terms and conditions shall apply on Leave:

- Ordinary Annual leave: An employee will have the right to take a paid leave regardless of his/her position (profession), terms of employment or the effective period of their employment contract. The duration may vary depending on the type of workers, causes and reasons (up to 3) calendar days per month.

- Sick leave: The employee is entitled to a sick leave based on a report from concerned medical authority. For every year of work, the worker is entitled to thirty days' sick leave period paid by the employer. The sick leave period to which a worker is entitled may be accumulated for a total of up to 180 days. During the sick leave an employee is entitled to his/her full salary, half the salary for the second leave and without salary for the third (for a period of time that shall not exceed 180 days). Where the employee is not able to resume his work after taking all the sick leaves with full/half/without salary, he/she will be released.
- Maternity/Paternity leave: Female workers will get paid a maternity leave. An expectant mother would be entitled to 21-day maternity leave, to be extended to 51 days after submission of the necessary documents. This is followed by 12 months with half the salary. Pregnant women will be reassigned and allowed to work in non-hazardous, non-arduous work as per medical advice without pay severance or penalty. A woman worker is entitled to a maternity leave at full pay of not less than 14 weeks per year.

10.8.4 Rest Breaks

The employees must be granted a rest and meal break during the workday. Time and duration shall be regulated by Iraqi Labour Law (30-60 min) per day.

10.8.5 Injuries and Death

It is the responsibility of the PMU to ensure that all workers, including temporary and daily laborers, shall be appropriately insured against injuries and death.

10.8.6 Child Work

No child will be allowed to work under the Iraq COVID-19 Vaccination Project. The PMU will keep registers and logs of their employees and contracted workers. The minimum age shall be 18 years old.

10.9 Grievance Mechanism

An effective Grievance Mechanism (GM) was also put in place in 2016 and 2017 at MoHE covering PHHCs and Hospitals and will be used for the GRM relevant to COVID-19 Vaccination.

The system will be updated, and the capacity of the hotline will be extended to receive and respond to additional calls. to include specific measures for addressing SEA/SH to maintain confidentiality and safeguard the individual’s identity. Through the grievance process, information will remain anonymous and will not require the survivor to record more details than nature of the complaint, such as background information of the survivor and information on whether the survivor was referred to services.

The receipt of any complaint by MoHE will be through the **Complaints and Investigation Section** through the complaints reception unit and will be handled by the units listed below as per the tasks and duties of each unit

- **Complaints Reception Unit:** receives and converges telephone complaints through the department's official phone numbers announced in all health institutions to be available to all citizens, as shown below: 07901939809 or 07726180982. All health departments have also been informed of the department's official e-mail address to receive citizens' complaints, especially when documents and supportive documents are needed, and it is dep.ci2017@gmail.com .
- **Monitoring, and information analysis Unit**: studies and analysis all complaints received by the complaints reception unit, and expose them to the responsible of the division. (copy of complaints shall be sent to the E&S team for reporting).
- **Follow-up unit:** Follows on the actions taken regarding the complaints received by the division and keeps all the priorities related to the complaint where all complaints are studied and analyzed before being presented the general manager to take appropriate actions. (copy of actions relating to complaints shall be sent to the E&S team for reporting).
- With regard to **urgent complaints** that need an urgent and fast procedure, the procedure is either through the formation of urgent central committees from our department or through overtaking them directly to the concerned health departments by telephone.

The structure of GM will also cover the COVID-19 vaccination related issues such as people starting to show symptoms and need to be assessed and referred to hospitals, questions and complaints. A designated number will be put in place for COVID-19 vaccination.[22]

A daily report is being kept for the calls being received regarding COVID-19 vaccination. Names and numbers of the callers are taken and registered. However, anonymous grievances can be raised and addressed. The Project also records the complaints received related to the Project in general such as environmental concerns. The GM includes also an appeal process for unresolved grievances that was established before the Project restructuring to the request of the WB.

The respondents are regularly trained on how to handle the calls and a clear process is set for the grievance handling mechanism. The MoHE complaints number and related uptake channels will be widely disseminated to reach all citizens and vulnerable groups.

Whenever there is an unresolved grievance, such as someone thinking they should be vaccinated earlier, the patient can contact the vaccine center who will convey the message to the committee to act upon.

[22] Letter issued by the MoHE – Reference No. 507 dated 25/02/2021

The GM was clearly communicated during the virtual stakeholders' engagement held on March 31, 2021 and will be widely disseminated as part of the overall communication campaigns using, among others, social and broadcasting media. All staff and operators who will be handling the GRM will receive the necessary training for effective handling of complaints including on any potential SEA/SH related complaints, complaints from the elderly or other vulnerable groups and grievances regarding the conduct of security personnel.

For SEA/SH related complaints, referral pathways may include coordination with the relevant NGOs

Doctors, nurses and vaccinators will also have the option to file their grievances through the MoHE internal procedures and primarily through the "diwan" or "registrar" where all grievances will be officially recorded and addressed by the responsible staff at the MoHE.

Another uptake channel for internal complaints is through the grievance boxes allocated throughout the MOHE. In addition, the grievance boxes allocated at the selected vaccination centers / hospitals under the national vaccination plan will be another uptake channel for doctors, nurses and vaccinators to register their grievances which will accordingly be handled by the relevant hospital staff. The principles of confidentiality and anonymity will also be applied to the internal grievances redress mechanism. Grievances will be handled efficiently and in a specified timeline and not exceeding 5 days.

Direct workers can file grievances through the PMU. The grievance should be investigated and resolved to the satisfaction of the grievant within 5 days. If not resolved the grievance can be escalated to the WB GRS for resolution. Unresolved grievances can still be escalated to the level of the appropriate penal/arbitration system as per the contract with the WB. The GRM for labor should guarantee anonymous complaints, complete confidentiality and no retaliation policy.

Contracted workers may file grievances through their contractors. The grievance should be logged, investigated and resolved to the satisfaction of the grievant within 5 days. If the grievance is not resolved, it can be escalated to the assigned ESF specialist at the PMU for further investigation and attempt of resolution. If still not resolved the grievance can be escalated to the Iraqi penal system. The GRM for labor should guarantee anonymous complaints, complete confidentiality and no retaliation policy.

The GRM will be clearly documented with close follow up by the responsible persons who will follow up and monitor the GM in a GM log.

10.10 Contractor Management

The PMU will be responsible for monitoring the performance of electrical works contractors and their contracted workers, as applicable. Such monitoring may include periodic audits, inspections of work sites, labor management records and reports compiled by contractors as required by the Environmental and Social Commitment Plan ("ESCP"). In particular, in instances where local suppliers would be engaged, the PMU may carry out due diligence procedures to identify if there are significant risks where the suppliers

are exposing workers to serious safety issues or exploiting child or forced labor. In instances where foreign suppliers would be selected, the PMU will be required to inquire during the procurement process whether the supplier has been accused or sanctioned for any of these issues and also their corporate requirements related to child labor, forced labor, and safety. If there are any risks related to safety and child and forced labor identified, procedures to address these risks will be prepared accordingly.

Requirements of ESS2 will be incorporated into contractual agreements with all contractors and subcontractors. Procedures will also be put in place to manage and monitor the performance of contractors. The contractual agreements will include noncompliance remedies (i.e. sanction clause) for possible noncompliance with E&S provisions by the contractor. The ESS2 requirements will include periodic audits, inspections, and/or spot checks of project locations or work sites and/or of labor management records and reports compiled by third parties, where applicable. Third parties' labor management records and reports may include: (a) a representative sample of employment contracts or arrangements between third parties and contracted workers; (b) records relating to grievances received and their resolution; (c) reports relating to safety inspections, including fatalities and incidents and implementation of corrective actions; (d) records relating to incidents of noncompliance with national law; and (e) records of training provided for contracted workers to explain labor and working conditions and OHS for the Project.

COVID-19 specific measures shall also be incorporated into contractual agreements, which may include but not limited to:

- Provision of medical insurance covering treatment for COVID-19, sick pay for workers who either contract the virus or are required to self-isolate due to close contact with infected workers and payment in the event of death.
- Specific procedures relating to the workplace and the conduct of the work (e.g. limiting the number of workers present).

Including contractual provisions and procedures for managing and monitoring the performance of contractors, in light of changing circumstances prompted by COVID-19.

The PMU should ensure the following is included in the contractual documents of contractors, suppliers and consultants

- All suppliers, contractors, and consultants shall comply with all GoI MOHE and the WB published policies and procedures related to the control of the spread of COVID-19;
- All contractors shall follow the measures and procedures stated in Section 7 "Policies and Procedures" in regards to Construction Workers of this LMP; Occupational Health and Safety, (OHS) at the Workplace: all suppliers and contractors shall provide a safe working environment by taking precautions and measures necessary to protect workers and to provide personal protection equipment and protection to workers from work hazards and occupational diseases, and to familiarize workers with the dangers of work and occupation, including those related to COVID 19 before their employment;
- All suppliers, contractors, and consultants shall provide their own workers with the

required Personal Protection Equipment (PPE), and according to the work being implemented

- All Suppliers, Contractors, and consultants shall ensure that their own workers comply with their internal Occupational Health & Safety (OHS) instructions; as well as those published by the relevant Ministries of the GoI
- All suppliers, contractors and consultants shall provide instructions on Health and Safety (OHS) as part of the induction process of new workers;
- All suppliers, contractors and consultants shall ensure that their own workers wear appropriate PPE at all times while performing their tasks related to the project;
- Instruct the personnel regarding any supplementary/ new regulations
- No juveniles under the age of 18 shall be recruited under any circumstances, this will be verified through confirming the ages of the workers prior to their employment, interviewing them and verifying the documents of the workers;
- All contractors shall be responsible for the safety and health of people, properties and communities who may be affected by the works;
- All contractors shall ensure its workers understand and adhere to the Code of Conduct specified in Section 5 of this LMP
- The contractors shall not perform any work outside normal agreed site working hours unless authority to do so has been obtained in writing from the MoH Engineer.

All contractors, suppliers and consultants should immediately report, to the PMU, any serious incidents and fatalities

11 Annex III Gender-Based Violence Action Plan

This Gender- Based Violence Action Plan (GBVAP) forms the basis for operationalizing the results and recommendations of the gender analysis. It contains specific gender elements to be considered in the Project design and during the implementation of Project measures and activities. Moreover, it helps to monitor implementation of these measures and activities. Hence, the GBVAP ensures an effective gender mainstreaming and integration of a consistent gender-perspective in the Project in order to maximize development co-benefits. The aim is to promote opportunities, drivers of change and positive gender dynamics as well as to manage and mitigate potential adverse risks over the duration of the Project.

The objective of the GBV Action Plan is to and explore how to strengthen or enhance the procedures to ensure equity and non-discrimination, as well as to prevent gender-based violence during project implementation. The GBVAP is closely aligned to the outputs of the planned activities. It complements the Environmental and Social Risk and Mitigation Section . The Project will apply the following measures:

- The project will provide trainings on managing SEA/SH cases if any to all project workers
- When applicable, Project workers will have to sign a code of conduct. Staff in PMU, health care, and administrative, involved in vaccination will sign Codes of Conduct.
- The Project will disseminate information related to SEA/SH to health service providers and intended beneficiaries to enhance SEA/SA awareness and prohibit SEA/SH during the provision of health care. The disseminated information will include, but not limited to, contact information of Gender Based Violence (GBV) psychosocial support and emergency medical services (within the health system). The information can be disseminated in different ways, such as public posters, training workshops, and two-way communication between health authorities and communities, as well as development of additional rapid guidance on how to deal with SEA/H complaints in operations with existing GRMs or using hotlines.
- The communities living in the vicinity of health facilities that will be supported by the project will be made aware of the GM that can be utilized to raise concerns or complaints regarding the conduct of project related workers. Any cases related to SEA/SH will be handed through a separate GM channel.
- The PMU will ensure prevention and reporting procedures available for SEA and SH as set out in the SEP.
- The Projects will document the positive and negative effect that project's activities have on gender relations by setting up an adequate, gender-sensitive results-based monitoring and by collection of sex-disaggregated data.
- A gender-sensitive language is used in reports, training materials and publications.
- In the program team(s), competencies on gender will be considered during the hiring process and (further) developed by means of training, where needed.
- The GBVAP will be executed, where possible, by the different entities involved in the Project management, including all concerned Government line agencies and development partners.

12 Annex IV Risks and Mitigation Measures in Using Security Forces

Due to ongoing conflict and instability in the country, the Project will require appropriate security arrangements for the safe deployment of vaccines. Upon request by Pfizer, the National Coordination Committee issued a decision for the security forces to accompany the distribution of Pfizer's shipments. The military will provide security for the vaccine transport vehicles and convoys and the vaccine storage locations. Police and Army will provide regular protection services to the vaccination facilities without interfering with allocation and access to vaccines nor the vaccination process and therefore will not be involved in the direct application of the vaccinations to the priority populations. Potential interaction between security forces and Project workers and local communities may lead to conflict. Based on the nature of roles of security forces in this Project, the security personnel will have very limited direct interaction with communities and Project workers. In such case, the potential social risks of using security forces are assessed as low to the proposed Project. The key social risks related to use security forces in this Project are potential non-compliance with the Code of Conduct. A Code of Conduct (CoC) has been prepared for all project workers (Please see Annex VIII). The CoC clearly indicates the unacceptable behavior. To mitigate the potential risk, the MOHE will coordinate with the relevant security authorities to ensure that the CoC and other principles described in the ESCP will also be applied to the security personnel who will be deployed for the Project and that use of force always be proportional to the nature of the incident. As per the SEP, the project GRM will address grievances raised by Project stakeholders on unlawful or abusive acts of security personnel. The implementation of these security mitigation measures will be monitored and reported as part of Project monitoring/reporting processes.

13 Annex V List of participants in the consultation.

List of Attendees

Stakeholder Consultation Session 24/ June/ 2021

	Attendees	Position
1	Dr. Faris Al Lami	Physician/ Epidemiologist/ Academic/ Faculty of Medicine, University of Baghdad
2	Dr. Mithal Al Azzawi	Sociologist/ Academic/ University of Baghdad
3	Dr.Hanaa Al Maamoori	Dentist/ MoH
4	Mr. Ayad Moayad	Director of Iraqi Institute for Development/ NGO - Ninewa
5	Dr. Wathiq Abduljabbar	Vetirenay Physician/ IPC officer at Medical City
6	Dr.Manal Younis	Pharmacist/ Director of Pharmacovigilance center/ MoH
7	Dr. Ali Azeez	Pharmacist/ Academic/ Faculty of Pharmacy/ University of Baghdad
8	Dr. Hasanein Faisal	Physician/ Academic/ Faculty of Nursing/ Al Bayan Private University
9	Mr. Muafaq Al Khafaji	Chairman of Handicapped Association in Iraq
10	Dr. Nada Suham Taha	Physician/ Public Health Directorate
11	Dr.Kareem Farhan	Nurse/ Director of Nursing Dept. MoH
12	Dr. Salah Al Mosawi	Chairman of Al Rafidain Center for Health Development / NGO
13	Mrs. Saadiya Flaieh	Chairman of Maan (together) organization to protect human being and environment
14	Dr. Rusul Naji	Dentist/ Academic/ Faculty of Dentists/ Al Bayan Private University
15	Dr. Teeba Nizar	Pysician/ Academic/ Faculty of Nursing/ Al Bayan Private University
16	Eman Fadhil	Academic/ Faculty of Nursing/ Al Bayan Private University
17	Dr. Hazem Azeez	Professor of Environment and Pollution/ Al Qasim University
18	Dr. Ibtisam Fareed	Dobiz NGO for Environment Protection in Baghdad
19	Assistant Professor Nibras Al Saffar	Market Research and Consumer Protection Center/ Baghdad University
20	Assistant Senior Photographer Wameedh Anwar	Media Section/Directorate of Environment in Karbalaa
21	Dr. Saif Al Badr	Director of Media Dept./ MoH
22	Dr. Nour Mohammed Ali	Media Dept./ MoH
23	Dr. Mohammed Chiad	Media Dept./ MoH
24	Dr. Suad Mohammed	Media Dept./ MoH

25	Mr. Ali Abdulsaheb	Directorate of Environment in Karbalaa
26	Assistant Chief Physicist Saady Hussein	Radiation Monitoring Section/ Directorate of Environment in Karbalaa
27	Chief Engineer. Neima Fadhil	Environment Monitoring Section/ Directorate of Environment in Karbalaa
28	Mr. Emad Kazem	Administrative staff/ Directorate of Environment in Karbalaa
29	Ms. Luma Abdulameer	Media Section/ Directorate of Environment in Karbalaa
30	Mr. Mahmood Shaker	Urban Section/ Directorate of Environment in Karbalaa
31	Mr. Hussein Adel	Urban Section/ Directorate of Environment in Karbalaa
32	Mrs. Wasan Jabbar	Chemicals Section/ Directorate of Environment in Karbalaa
33	Chief Physicist Nibras Hashem	Radiation Monitoring Section/ Directorate of Environment in Karbalaa
34	Senior Physicist Rasha Jameel	Radiation Monitoring Section/ Directorate of Environment in Karbalaa
35	Assistant Chief Geologist Zainab Muhsen	Urban Environment Section/ Directorate of Environment in Karbalaa
36	Chief Engineer Haidar Razzaq	Urban Environment Section/ Directorate of Environment in Karbalaa
37	Jornalist Mohammed Ali	Media Section/ Directorate of Environment in Karbalaa
38	Ph. Oulaa	MoH
39	Mr. Luay Al Moukhtar	E&S team
40	Dr. Donya	E&S team
41	Dr. Salma Kredy	E&S team
42	Mrs. Ikhlas Khaleel	Public Employee/ MoH/ PMU secretary
43	Ph. Yasmine Jamal	Technical Officer

14 Annex VI 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

15 Annex VII: Technical note: Use of Military Forces to Assist in COVID-19 Operations Suggestions on how to mitigate risks – Version 1- March 25, 2020

It is common practice for Governments to utilize military or security personnel during public health emergencies. The ability to do this, and the requirements relating to such mobilization, are often set out in executive orders or instructions. A 'public health emergency' will usually be defined under national law. For example, the US Department of Defence (DoD Instruction 6200.03, March 28, 2019) defines a public health emergency to include "*the occurrence or imminent threat of an illness or health condition that poses a high probability of a significant number of deaths, serious or long-term disabilities, widespread exposure to an infectious or toxic agent, overwhelmed health care resources, or severe degradation of mission capabilities".*

For the reasons set out in section 1 below, it is expected that military or security forces will be utilized in different ways in response to COVID-19. They may be used directly to carry out activities in a World Bank-supported project. Or they may be mobilized more generally to implement Government programs, which are also supported by the Bank. Where military/security forces are utilized, either directly or indirectly, in connection with Bank-supported operations, questions will arise about the risk of the operation. Is it automatically high or are there effective ways of mitigating the risk. This guidance sets out suggestions for due diligence and mitigation measures to address the risk.

1. WHAT ARE THE POSITIVE ASPECTS ABOUT USING THE MILITARY?

Where relevant, consider the following and document relevant details:

- **Human rights:** Depending on the country, military personnel may be aware of the need to respect human rights and received relevant training.

- **"NBC" capabilities**: Many military forces have nuclear, biological and chemical capabilities. They may have existing biological defense capabilities e.g. ability to deploy with personal protective equipment (PPE); training in decontamination; procedures or advice on how to carry out relevant activities.

- **Medical expertise:** Medical and other professionals within the military are likely to be trained to deal with medical emergencies, and therefore may be better able to cope in situations in which there may be mass casualties.

- **Disciplined response:** Generally, military personnel are expected to respond in a disciplined manner to commands and will have capabilities which will be useful in these types of emergencies (medical, engineering, construction).

- **Civic action programs**: Military may also have specific civic action programs and infrastructure to support these (e.g. mobile clinics/communication procedures).

2. WHAT ARE THE THINGS TO WATCH FOR?

(a) Diversion of materials, aid and assistance: Diversion can take the form of confiscations and re- use, misappropriation and theft. While a certain level of diversion may be inevitable in certain circumstances, this issue is likely to present reputational issues (especially when the crisis dissipates).

(b) Allegations of human rights violations: This will be a risk, including as it relates to Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH), and the Bank needs to be clear and transparent about what measures are being adopted to minimize these risks. Tools that should be considered include the ESF Good Practice Note (GPN) on Use of Security Forces, on SEA/SH, and the IFC Good Practice Handbook on the Use of Security Forces: Assessing and Managing Risks and Impacts.

(c) Putting World Bank staff at risk: This is particularly a concern where military/security forces are likely to be undisciplined. The risk may be heightened when Bank staff are trying to address the risk of diversion referred to above. While staff may try to address this risk by avoiding direct interaction with the military, this is not likely to be feasible in a project setting.

(d) International media comment and reaction: This will be a challenge, and it may not be possible to avoid negative comment entirely. It is important to be transparent about the activities the World Bank is supporting and the mitigation measures that are being implemented to address risks.

2. WHAT ARE THE WAYS TO ADDRESS THE RISKS?

(a) **Get a view of the reputation and capability of the military:** Talk to those who might have up to date and accurate information: e.g. the Defense Attaché at the relevant Embassy; the US or UK Government; refer to Jane's Defence Weekly.

(b) **Identify the structure under which the military will be operating:** While they will continue to abide by their own rules and procedures, it is likely that the military will also be subject to relevant national requirements relating to the public health emergency and the specific activities that they are required to carry out e.g. instructions issued by public health officials. In the context of a Bank-supported operation, it is good practice to document (as far as possible) the structure under which the military are operating, including the chain of command, with specific reference to the activities they will or are likely to carry out (see paragraph (i) below).

(c) **Clarify who is responsible for human rights issues nationally**: Many countries have a Human Rights Commission. If such commissions do not exist, there is usually an Ombudsman, Human Rights office or inspector general at the national level with jurisdiction to deal with such issues. Identify the relevant parties and consider whether it would be appropriate to consult them for advice.

(d) **Identify other specialized parties and ask for advice:** There are both national and international NGOs which follow and support these issues (e.g. Human Rights Watch (HRW), Amnesty). There is also the International Committee of the Red Cross (ICRC) and the International Crisis Group. Identify

relevant parties, with reference to the context and nature of the operations, who may be in a position to provide valuable advice.

(e) **As required under the ESF, cooperate with relevant stakeholders on a risk assessment**: Carry out a risk assessment to identify the specific risks associated with the proposed use of military. This assessment needs to be conducted with those that are involved in the operation, including Government counterparts, to ensure that an accurate picture of the risks emerge, that appropriate mitigation measures are identified and that both the risk assessment and the mitigation measures are owned by the project and the Government.

(f) **Consider asking a credible party to act as an observer/third party monitor**: This can be considered under the ESF provisions for third party monitoring as noted in ESS1 and ESS10, as well as the ESF Good Practice Note on Third Party Monitoring. Relevant groups with experience in this field will depend on the context, and may include the parties referred to in paragraph (d) above.

(g) **Be clear on what the military will do: Identify the activities and set them out clearly in the legal agreement:** e.g. construction, enforcing quarantine restrictions, distribution of medical supplies or vaccines, distribution of other supplies. This will support a more accurate risk assessment. Note that in some circumstances, what could otherwise be viewed as inappropriate behavior by the military (or at an extreme, a possible abuse of rights) may be authorized and necessary in situations of a public health emergency. This will depend on the activities that the military is required to carry out and will be particularly relevant where they are required to enforce public order or quarantine restrictions.

(h) Set out specific requirements as covenants in the legal agreement and in the Environmental and Social Commitment Plan (ESCP) as appropriate: The provisions should set out the 'ground rules' for military engagement, including: (i) requirements to comply with ESS4 (see Annex attached); (ii) reporting obligations (specify on what, how often, to whom); (iii) specific prohibitions e.g. no child labor, no forced labor, restrictions on what military personnel under the age of 18 can do (if anything); (iv) health and safety requirements; (v) Code of Conduct (CoC) type obligations; (vi) requirements for the GM; (vii) training required and how often (specify on what – e.g. Voluntary Principles on Security and Human Rights, interactions with the community, operation of the GM, use of personal protective equipment (PPE), CoC).

16 VIII: Iraq Employee Code of Conduct

جمهورية العراق
هيئة النزاهة
دائرة الوقاية

هيئة النزاهة

لائحة السلوك الوظيفي
رقم (١) لسنة ٢٠١٦ والتعديل الأول لها

أولاً : تسري هذه اللائحة على الموظف والمكلف بخدمة عامة.

ثانياً : تهدف هذه اللائحة الى إرساء قواعد ومعايير السلوك الاخلاقي لضمان الأداء الصحيح والمنصف والسليم لواجبات الوظيفة العامة.

ثالثاً : يلتزم الموظف والمكلف بخدمة عامة بالضوابط التالية:-

١ – إبلاغ الجهات المختصة بأية حالة من حالات الفساد عند العلم بها.

٢ – أداء واجبات الوظيفة بكل أمانة ونزاهة ومهنية وإخلاص وحيادية وحرص على المصلحة العامة.

٣ – تقديم الخدمة المكلف بها للمواطنين بكل حيادية دون تمييز على أساس الطائفة أو المعتقد أو القومية أو غيرها.

٤ –عدم الخوض في الموضوعات الطائفية أثناء الدوام الرسمي.

٥ – الحرص على الإلمام بالقوانين والأنظمة والتعليمات النافذة ذات العلاقة بعمله وتطبيقها دون أي إخلال او إهمال.

٦ – الامتناع عن إعطاء أية وعود مخالفة للقانون وعدم التأثر بالعواطف تجاه الآخرين عند أداء واجباته.

٧ – أن تكون المعلومات التي يقدمها إلى هيأة النزاهة أو الجهات الرقابية الأخرى أو أية جهة مختصة أخرى صحيحة ودقيقة متى ما طلب منه ذلك أو فرض عليه القانون تقديمها.

٨ – عدم التعسف في استعمال السلطة الممنوحة له بموجب القانون.

٩ – العمل على تنمية قابلياته وخبراته وقدراته الوظيفية.

١٠ – التصريح عند التعيين بطبيعة مصالحه الشخصية التي لها تأثير في أداء واجباته الرسمية.

١١ – الامتناع عن القيام بأي نشاط من شأنه أن يؤدي إلى نشوء تضارب مصالح بين مسؤولياته ومصالحه الشخصية.

١٢ – الامتناع عن العمل أو قبول مكافأة من أية جهة في القطاع الخاص لها علاقة مباشرة بمجال عمله السابق بعد تاريخ انتهاء خدمته لمدة ثلاث سنوات.

رابعاً : يلتزم الموظف والمكلف بخدمة عامة بالواجبات المنصوص عليها في القوانين ذات الصلة.

خامساً : يلتزم الموظف والمكلف بخدمة عامة بما حظرته القوانين ذات صلة.

سادساً : يلتزم الموظف والمكلف بخدمة عامة بمبادئ حقوق الإنسان على وفق الدستور والقوانين النافذة أثناء تأدية الواجب.

سابعاً : يلتزم المشمولون بلائحة السلوك الوظيفي بالإطلاع على ما جاء فيها، و التوقيع عاى النموذج الملحق بها و العمل بموجبها وتلتزم الجهات المعنية باتخاذ الإجراءات الإنضباطية بحق الممتنعين عن توقيع اللائحة عمداً.

ثامناً : في حالة إخلال الموظف والمكلف بخدمة عامة بأي من قواعد السلوك التي وردت في هذه اللائحة تلتزم الجهات المعنية باتخاذ الإجراءات القانونية بحقه على وفق القوانين ذات الصلة.

تاسعاً :تلتزم مؤسسات الدولة بحفظ لائحة السلوك الوظيفي في الأضبارة الشخصية لكل موظف و مكلف بخدمة عامة بعد الأطلاع عليها و التوقيع على النموذج الملحق بها .

عزيزي المواطن .. عزيزي الموظف

تعد لائحة السلوك الوظيفي وثيقة شرف مقدمة من قبل الموظف و المكلف بخدمة عامة و التي تضمن أداءه لعمله بالشكل الصحيح تطبيقا للقوانين ذات الصلة، إن الإخلال بمضمون هذه الوثيقة يعرض الموظف و المكلف بخدمة عامة للمسائلة القانونية وفق القوانين ذات الصلة.

عزيزي المواطن

في حال حصـــــول أية مخالفة من قبل الموظف والمكلف بخدمة عامة لأي من الالتزامات الواردة في أعلاه فسارع لتقديم شكوى إلى رئيس الدائرة التي يعمل بها، وفي حالة عدم إتخاذه الاجراء المناسب، يمكنك الاتصال على الخطوط الساخنة لهيأة النزاهة أو البريد الألكتروني .

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