ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Ministry of Health

Jordan COVID-19 Emergency Response Project
Final

وزارة الصحة

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SUBMITTED BY THE MINISTRY OF HEALTH
To the World Bank February 16 2021

Contents

Executive Summary

The Ministry of Health conducted an assessment to identify the gaps in capacities in detection and response to COVID-19, using the national capacities review tool of the World Health Organization in 2020. Based on this assessment, a support was provided by WHO to the MOH to develop its National Preparedness and Response Plan (NPRP) for COVID-19 aimed to strengthen the capacities of the Government of Jordan (GOJ) to prevent, detect and respond to the pandemic outbreak in accordance with International Health Regulation (IHR) technical areas. Accordingly, the World Bank is supporting the Ministry of Health of Jordan with a USD 20 million grant to implement a COVID-19 Emergency Response Project (P173972) following its National Preparedness and Response Plan for COVID 19.

Therefore, this Environmental and Social Management Framework (ESMF) has been developed to assists to the implementation of COVID-19 Response Project inside Jordan in term of developing the environmental and social (E&S) management plans (ESMP) in accordance with the World Bank's Environmental and Social Framework (ESF). The ESMF outline the procedure to identify, mitigate the Environmental and Social Risks and Impacts associated with the project activities and through the development of the ESMP. In addition to other chapters explaining the infection plan and the waste management plan available at the MOH, Implementation Budget and Stakeholder Engagement Requirements and approach.

The health care offered in Jordan is considered of a very high quality, guaranteed by the numerous international and domestic accreditations that most hospitals in the country has earned. Jordan has its own health care accreditation council in place, The Health Care Accreditation Council (HCAC) in Jordan and the region's only non-profit ISQua (International Society for Quality in Health Care) accredited institution dedicated to improving the quality of health care services and promoting patient safety through accreditation, consultation and capacity building established in (2007). Medical waste is defined as all solid, liquid or gaseous waste generated by various healthcare facilities and classified according to its hazard and negative health impact characteristics as infectious and highly infectious, anatomical, sharp, chemical, pharmaceutical, compressed, radioactive, genotoxic waste, and wastes with a high content of heavy metal elements. Classification of HCW according to the "Management of medical waste instruction no. 1/2001.

The project aims to prevent, detect and respond to the threat posed by COVID-19 and strengthen the national health system for public health preparedness. It will also help develop Jordan's preparedness capacity to mitigate risks from comparable health and climate-related hazards. This project is prepared under the WBG's COVID-19 response global framework and financed by US$20 million under the Fast Track COVID-19 Facility (FTCF). Since Jordan is an IBRD eligible country, the FTCF is on IBRD financing terms. The project will only finance inputs aligned with WHO guidelines and standards for combating COVID-19.

This project will be implemented with three main components including the emergency COVID-19 response, which aims to prevent and limit to the spread of COVID-19 in Jordan. This will be achieved through providing critical support to enhance case detection, testing, case management, recording and reporting, as well as contact tracing, risk assessment and clinical care management. Specifically, this component will finance the procurement of medical and non-medical supplies,

medicines, vaccines, equipment, consultancy services and implementation costs for capacity building as needed for COVID-19 preparedness and response activities consistent with the National Preparedness and Response Plan. The second component includes the implementation management, monitoring, and evaluation, where it will finance human resources and running costs for the International Coordination and Project Management Unit (ICPMU) at the MOH. The last component will deal with contingent emergency response, which would draw from uncommitted funds under the project from other components to cover the emergency response.

This plan has investigated the policies, legal and regulatory framework in relation to ESS, where a detailed description of Environmental and Social Standards (ESS). Therefore, each of ESS1, ESS2, ESS3, ESS4 and ESS10 have been described following the existing laws, bylaws or regulations in Jordan and the existence of any strategies or policies related to. This has followed by analyzing the Environment and Social Risks and Mitigation, following the project phases including i) Planning and Design Phase, ii) Construction Phase, iii) Operational Phase and iv) Decommissioning. Based on this analysis, a detailed plan has been developed illustrating the activities and potential E&S issues and risks in relation to the proposed mitigation measures, responsibilities, timeline and budget. Several activities and potential E&S issues and risks have been explored including medical waste management and disposal, protecting healthcare workers, solid waste generated from minor civil works, OHS risks for construction workers, increased risk of COVID-19 Transmission, COVID-19 testing and diagnosis, containment of COVID-19, poor management of medical waste, poor handling and Management of Hazardous Materials, and decommissioning of interim of quarantine facilities and medical equipment. Procedures to Address Environmental and Social Issues were provided in the screening phase where as an example all activities undertaken by the project will be screened have been illustrated in special forms. The consultation and disclosure activities have been provided in addition to the review and approval as well as the implementation.

The Stakeholder Engagement Plan SEP has been discussed for COVID-19 project, that outlines the ways in which the project team will communicate with stakeholders and includes a mechanism by which people can raise concerns, provide feedback, or make complaints about project and any activities related to the project. The Grievance Redress Mechanism GRM for the Ministry of Health was provided which aimed to assist to resolve complaints and grievances in a timely, effective, and efficient manner that satisfies all parties involved. Specifically, it provides a transparent and credible process for fair, effective, and lasting outcomes. For that, the project established a specific GRM. Finally, the project implementation arrangements, responsibilities and capacity building.

The MOH therefore is committed to implement the COVID-19 Response Project Components to help the country responding positively to COVID-19 pandemic and at the same time to protect environment, workers and community from any adverse Environmental or Social Impact. MOH will also provide the implementation partners in the country with the material resources, technical guidance, and actions so that the project is implemented in compliance with the Environmental and Social Standards (ESSs) requirements.

١. Background

In January 2020, the Ministry of Health (MOH) conducted an assessment to identify the gaps in capacities in detection and response to COVID-19, using the national capacities review tool of the World Health Organization (WHO). Based on this assessment, a support was provided by WHO to the MOH to develop its National Preparedness and Response Plan (NPRP) for COVID-19, which was concluded in February 2020. This plan was structured based on the assessment results of the MOH, and serves as a practical guide for national authorities and health sector partners in fulfilling the existing gaps. In addition, the plan aimed to strengthen the capacities of the Government of Jordan (GOJ) to prevent, detect and respond to the pandemic outbreak in accordance with International Health Regulation (IHR) technical areas. Accordingly, the World Bank is supporting the Ministry of Health of Jordan with a USD 20 million grant to implement a COVID-19 Emergency Response Project (P173972) following its National Preparedness and Response Plan for COVID 19.

Jordan is currently facing a serious issue with the accelerated increase in COVID-19 cases, especially with Jordan's proximity to neighboring countries and its linkages with the regional and global markets through its diverse economic activities. Jordan health sector dealing with COVID-19 is represented by seven public hospitals, where six have been designated for quarantine, isolation and treatment, in addition to ten public and private laboratories to diagnose COVID-19, where testing and treatment at public facilities have been provided free of charge to all Jordanians and non-Jordanians fulfilling the governmental instructions represented by using "Aman" mobile application. Currently, the MOH has designated hospitals with a capacity of 2,515 beds, 86 quarantine rooms, 69 isolation rooms, and 106 intensive care unit beds. Active surveillance and contact tracing for suspected cases continue throughout Jordan, with a particular focus on COVID-19 clusters.

In addition, the MOH increased the number of medical staff in primary and secondary healthcare facilities and established mobile clinics to treat minor illnesses and injuries as outpatient services at MOH facilities have been suspended. Approximately 3,200 medical and laboratory staff (5% of total medical and laboratory staff in Jordan) are engaged in the response. To respond to non-COVID-19 related health service needs, the MOH started newborn screenings, increased the amount of monthly medication distribution to health center pharmacies, and launched an online platform for Non- Communicable Diseases (NCD) drug refill services. Patients can request NCD medication refills online and receive medications by delivery to their homes, fulfilled by volunteers and health center staff.

Jordan was ranked to by the World Bank number one health care services provider in the region and among the top five in the world. The health care offered in Jordan is considered of a very high quality, guaranteed by the numerous international and domestic accreditations that most hospitals in the country has earned. Jordan has its own health care accreditation council in place, The Health Care Accreditation Council (HCAC) in Jordan and the region's only non-profit ISQua (International Society for Quality in Health Care) accredited institution dedicated to improving the quality of health care services and promoting patient safety through accreditation, consultation and capacity building established in (2007). The health sector in Jordan consists of service providers

(public, private, international and charity sectors) as well as councils and institutions working on the development of health policy, and as follows.

1. **The Public Sector** includes :
   - Ministry of Health
   - The Royal Medical Service (Military)
   - Medical services in public universities (University of Jordan Hospital (Amman), King Abdullah University hospital (Ramtha)
   - The Centre for Diabetes, Endocrinology and Genetics.
   - Health services in the ministries and government institutions (Greater Amman Municipality GAM and the municipalities in the provinces of the Kingdom, Department of School Health in the Ministry of Education, Department of Health and Safety, Ministry of Labour).
2. **The Private Sector** includes private hospitals and diagnostic and therapeutic centers, in addition to hundreds of private clinics and Medical support services.
3. **The International Sector and Charitable Sectors** provide services through United Nations Relief and Works Agency for Palestinian refugees in the near east (UNRWA), the UNHCR and King Hussein Cancer Center and Clinics and health services of the charitable organizations.
4. **The Councils and Organizations**
   - Higher Health Council(HHC)
   - Jordanian Medical Council
   - Jordanian Nursing Council
   - Food and Drug Administration (FDA)

Since the outbreak of the emerging coronavirus (COVID-19) in China in December 2019, and spread to various parts of the world and before The World Health Organization (WHO) on March 11, 2020, has declared the novel coronavirus (COVID-19) outbreak a global pandemic and called on countries to take actions to contain the virus, thus, the government of Jordan through its MOH has initiated early attempts to face the imminent danger. Part of the actions which were conducted by the MOH and relevant authorities:

- Prepare the basic facts of the disease, including symptoms, define people at risk to get infection, the definition of the suspected case and the confirmed case of the disease and distributed to all health sectors.
- Prepare awareness media program.
- Several meetings of the National Epidemiological Committee have been held since the beginning of the emergence of this disease in Wuhan, China, continuously.
- Preparing the national plan to deal with new cases of corona virus (COVID-2019).
- Installing thermal scanners and detectors at all crossings border, Queen Alia Airport, King Hussein Airport and Marka Civil Airport.
- Support medical personnel at all airports and crossings borders with PPE.
- Quarantine for all arrivals to Jordan for 14 days in hotels and resorts in Amman, Dead Sea and Aqaba.
- At early stages of COVID-19 issue, the government of Jordan coordinated with the Civil Defense Directorate to transfer cases from different regions to specific hospitals, where 13 ambulances were allocated to transport cases.

- At the beginning of the outbreak different hospitals were specified and named to receive suspected cases and do further investigations, such as:
  1. King Abdullah university Hospital in the north
  2. Prince Hashem Military Hospital in the south
  3. University of Jordan Hospital
  4. Karak Governmental Hospital
  5. Zarqa Governmental Hospital
- It was agreed with a disinfection and sterilization company to sterilize devices in Al-Bashir Hospital and to sterilize civil defense ambulances and that for MOH ones.
- Allocating 3 cars in the MOH central laboratory to transport samples from all over the Kingdom.
- Define number of private laboratories to do the COVID-19 investigation.
- Three hospitals to admit the confirmed cases, which are:
  1. Prince Hamza hospital / Amman
  2. King Abdullah university Hospital /Irbid
  3. Queen Alia military Hospital/Amman
- Conduct random epidemiological investigation and trace the suspected exposed
- First case in Jordan was in 2nd March 2020.
- Number of confirmed case in 3rd of June is (757), and recovered (561), number of deaths (9) cases.

The present Environmental and Social Management Framework (ESMF) is the primary instrument for managing environmental and Social (E&S) risks along the project progression by setting the principles, rules, guidelines and procedures for managing E&S risks of project activities. The ESMF follows the World Bank Environmental and Social Framework (ESF), and adopts the principles of proportionality and flexibility in managing risks and impacts.

2. Project Description

The project aims to prevent, detect and respond to the threat posed by COVID-19 and strengthen the national health system for public health preparedness. It will support the MOH in its efforts to immediately respond to and mitigate the risks associated with the COVID-19 outbreak to protect all residents in Jordan, including registered refugees. It will also help develop Jordan's preparedness capacity to mitigate risks from comparable health and climate-related hazards. Based on the NPRP, the project aims to fill critical gaps in the following technical areas: country-level coordination planning and monitoring; risk communication and community engagement; surveillance, rapid response teams and case investigation; point of entry; national laboratories; infection prevention and control; case management; and operation support and logistics. These technical areas have been identified to immediately strengthen MOH capacity to address the current COVID-19 crisis in a timely manner, while working within the country's existing systems and providing technical assistance as needed.

This project is prepared under the WBG's COVID-19 response global framework and financed by US$20 million under the Fast Track COVID-19 Facility (FTCF). Since Jordan is an IBRD eligible country, the FTCF is on IBRD financing terms. The project will only finance inputs aligned with WHO guidelines and standards for combating COVID-19. The project is working with two main active components and one Contingent Emergency Response Component, which are:

2.1 Component 1: Emergency COVID-19 Response

The aim of this component is to prevent and limit to the spread of COVID-19 in Jordan. This will be achieved through providing critical support to enhance case detection, testing, case management, recording and reporting, as well as contact tracing, risk assessment and clinical care management. Specifically, this component will finance the procurement of medical and non-medical supplies, medicines, vaccines, equipment, consultancy services and implementation costs for capacity building as needed for COVID-19 preparedness and response activities consistent with the National Preparedness and Response Plan. Activities will include:

1) **Case Detection, Confirmation, Contact Tracing, Recording and Reporting. This will help in:**

i. Strengthen disease surveillance systems, public health laboratories and epidemiological capacity for early detection and confirmation of cases
ii. Combine detection of new cases with active contact tracing
iii. Support epidemiological investigation
iv. Strengthen risk assessment; and
v. Provide on-time data and information for guiding decision-making and response and mitigation activities. In relation to these activities, the Ministry of Health (MoH) has launched a new application called "Aman" (safety) which notifies those who have uploaded the application of the possibility of their infection with COVID-19 and traces the people they have mingled with. By mid- July, 650,000 users (6.5% of population) have installed the application on their smart phone.

2) **Enhance Overall Healthcare Services and Clinical Capacity to Respond to COVID-19**. This sub-component aims to strengthen health care system capacity to provide optimal medical care by maintaining essential healthcare services. The activities include

i. Supporting the strengthening of case management facilities (i.e. quarantine, isolation and clinical care facilities) by equipping facilities with necessary equipment and commodities
ii. Minor civil works and retrofitting of quarantine, isolation and treatment rooms in such facilities. To the extent feasible, equipment and facilities will be procured and retrofitted in line with state-of-the-art principles of energy efficiency; procurement of essential medical equipment and supplies, such as ventilators, oximeters, laryngoscopes, oxygen generators, PPE, disinfectants and other equipment and supplies for COVID-19 case management as well as medicines and vaccines (when they become available); and
iii. Capacity building activities, such as training for health facilities staff on infection prevention and control and clinical case management for COVID-19. Training health workers covering risk mitigation measures better prepares them for other health threats including climate related risks. Protective equipment and hygiene materials will protect staff against other climate related disease, in particular new emerging zoonoses. Strengthened clinical capacities will enhance adaptive capacity, improving the health system's ability to respond to other health threats including climate-related ones, improving the population's resilience also to climate-change threats.

3) **Risk communication and community engagement**. This sub-component will support the design and implementation of effective public health measures to prevent contagion and will support the development and implementation of associated communication and behavior change interventions for key prevention behaviors, such as hand-washing and social distancing, which besides helping contain the spread of COVID-19 helps against the spread of other climate-related conditions and water- or food-borne diseases. Targeting particularly vulnerable groups such as seniors and people with chronic health problems or co-morbid conditions with this health advice, and advice on climate-related risks, will increase population resilience. Community mobilization and participation in prevention and control measures through existing community institutions, especially engagement of communities in disease surveillance will greatly boost population awareness and as a consequence detection capacity of diseases but also other climate-related risks, enhancing climate resilience help understanding and therefore taking action on climate change.
4) **Multi-sectoral coordination and response**. The project will support activities to enhance multi-sectoral response and action, including inter alia: the operations of command rooms at the central and regional levels; implementation of risk communications and community engagement campaigns; implementation of containment strategies, including point of entry interventions and operation of rapid response teams.

2.2 Component 2: Implementation Management and Monitoring and Evaluation

The second component will finance human resources and running costs for the International Coordination and Project Management Unit (ICPMU) at the MOH, including

i. Staffing
ii. Data collection, aggregation and periodic reporting on the project's implementation progress
iii. Monitoring of the project's key performance indicators and periodic evaluation
iv. Overall project operating costs and financial and technical audit costs; and

v. Monitoring and compliance with Environmental and Social Commitment Plan (ESCP).

Data collection and monitoring will be done in a sex and age-disaggregated manner to contribute to a better understanding of the epidemiological profile of the affected population. For speedy and effective project management upon effectiveness of the project, additional staff (individual consultants for fiduciary and environmental and social safeguards) will be hired for the ICPMU.

2.3 Component 3: Contingent Emergency Response Component (CERC)

In the event of an eligible crisis or emergency, the project will contribute to providing immediate and effective response to said crisis or emergency. This component would draw from uncommitted funds under the project from other components to cover the emergency response. To facilitate a rapid response, in case the CERC is activated, the restructuring of the project is deferred to within three months after the CERC is activated.

2.4 Eligibility and Criteria for Exclusion of Activities

This project excludes the following types of activities:

i. Activities that may cause long term, permanent and/or irreversible adverse impacts (e.g. loss of major natural habitat)
ii. Activities that have high probability of causing serious adverse effects to human health and/or the environment not related to treatment of COVID-19 cases
iii. Activities that may have significant adverse social impacts and may give rise to significant social conflict
iv. Activities that may affect lands or rights of local people or other vulnerable minorities.

3. Policy, Legal and Regulatory Framework

The World Bank has set ten Environmental and Social Framework (ESF), which will enable it 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, and it makes important advances in areas such as transparency, non-discrimination, public participation, and accountability including expanded roles for grievance mechanisms. Table 1 illustrates the Jordanian legal instruments that fulfil the relevant World Bank ESS requirements. In addition, it illustrates the World Bank ESSs that are relevant to the project as described in the Environmental and Social Commitment Plan (ESCP). It is important to note that the irrelevant ESS was not included in this table.

Table 1: Policies, legal and regulatory framework in relation to ESS

World Bank ESS	Description of the relevant ESS
ESS1 Assessment and Management of Environmental and Social Risks and Impacts	It sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project.
ESS relevant to the ESCP of the project	
According to the ESCP, the followings will be performed: • The Project will prepare, disclose and adopt an Environmental and Social Management Framework (ESMF) to assess the environmental and social risks and impacts of proposed Project activities, and to ensure that individuals or groups who, because of their circumstances, may be disadvantaged or vulnerable, have access to the development benefits resulting from the Project. • Prepare, disclose, adopt, and implement any environmental and social management plans or other instruments required for the respective Project activities as per the screening process, in accordance with the ESSs, the ESMF, Labor Management Procedure (LMP), the Infection Prevention and Control and Waste Management Plan (IPC&WMP), the Environmental, Health and Social Guidelines (EHSGs), and other relevant Good International Industry Practice (GIIP) including relevant WHO guidelines on COVID-19, in a manner acceptable to the Bank. • Incorporate the relevant aspects of this ESCP, including, inter alia, any environmental and social management plans or other instruments, ESS2 requirements, and any other required ESHS measures, into the ESHS specifications of the procurement documents and contracts with contractors and supervising firms. Thereafter ensure that the contractors and supervising firms comply with the ESHS specifications of their respective contracts. • The World Bank Guidelines (WBG EHS) for Heathcare Facilities are applicable to the project and provide the link for reference[1]	
Relevant legal instruments in Jordan	
Environmental Impact Assessment Regulation No. 37 of 2005	

[1] www.ifc.org/EHSguidelines/

This Regulation is composed of 21 articles and 5 Annexes. Articles 1 and 2 deal with terms and definitions. Article 3 defines the Environmental Impact Assessment, where all agricultural, industrial, commercial, housing and tourism projects shall obtain a previous environmental approval from the Ministry of Environment (art. 4). Article 5 provides for the establishment of the Technical Committee at the Ministry of Environment formed by 11 specialists to study Environmental Impact Assessments.

Article (3) and 4-M of the Environmental Protection Law No. (6) of 2017
Articles states that the Ministry of Environment is the authority responsible for protecting the environment in the Kingdom, and it is responsible for monitoring and measuring the elements and components of the environment.

The Environmental Monitoring Davison (EMD) at the Environmental Health directorate (EHD)/ MOH is in charge of compliance of health care facilities to the Medical waste management instruction 1/2001 monitoring

World Bank ESS	Description of the relevant ESS
ESS2 Labor and Working Conditions:	It recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

ESS relevant to the ESCP of the project

The Project shall be carried out in accordance with the applicable requirements of ESS2, in a manner acceptable to the Bank, including through, inter alia, implementing adequate occupational health and safety measures (including emergency preparedness and response measures), setting out grievance arrangements for Project workers, and incorporating labor requirements into the ESHS specifications of the procurement documents and contracts with contractors and supervising firms.

The Borrower shall implement the above measures in accordance with Labor Management Procedures (LMP) annexed to the ESMF and WHO guidelines on COVID19 in all facilities, including laboratories, quarantine and isolation centers, and screening posts, in a manner acceptable to the Bank and consistent with ESS2.

Adopt, implement and update the Occupational Health and Safety (OHS) measures in line with the ESMF, LMP, Infection Prevention & Waste Management Plan (IPC&WMP) and WHO guidelines on COVID-19 in a manner acceptable to the Association.

Relevant legal instruments in Jordan

Jordan's Constitution of 1952 with Amendments through 2011
Article 6 (ii) states that The Government shall ensure work and education within the limits of its possibilities, and it shall ensure a state of tranquility and equal opportunities to all Jordanians.

Article 13 states that compulsory labour may not be imposed on any person, but any person may be required to do any work or to render any service in circumstances prescribed by law.

Article 23 (i) states that work is the right of every citizen, and the State shall provide opportunities for work to all citizens by directing the national economy and raising its standards. (ii) defined workers' rights in details

Jordanian Labor Law no. (8) of 1996
Article (10) states that the Ministry shall assume the functions of organizing the labor market, occupational guidance and formulation of the instructions necessary for providing work and employment opportunities to Jordanian citizens within and outside the Kingdom in collaboration with the concerned parties. In addition, Chapter Nine: Safety and Occupational Health, Article (78) provided an extensive texts on the necessity to provide precautions and measures to protect the Employees from the hazards and diseases that may result from the work as well as from machines used therein.

Article (70) states that the working woman shall have the right to obtain a maternity leave totaling ten weeks with full pay prior to and after delivery provided that the period subsequent to delivery may not be less than six weeks. It shall be prohibited to put her to work prior to the expiry of such period. Article 71 states the working woman shall have the right subsequent to the expiry of the maternity leave provided for under article (70) of this law, to obtain, within a year of the date of delivery, a period or periods not exceeding one hour in total per day with pay for the purpose of nursing her new born .

Chapter Eleven: Labor Unions & Employers Societies provides a full detail on working hours of the employees and defines sound worker-management relationships.

World Bank ESS	Description of the relevant ESS
ESS3 Resource Efficiency and Pollution Prevention and Management	This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life-cycle.

ESS relevant to the ESCP of the project

Relevant aspects of this standard shall be considered, as needed, under action 1.2 above, including, inter alia, measures to: manage health care wastes, and other types of hazardous and nonhazardous wastes and use of resources (water, air, etc.) in accordance with ESS3, the EHSGs, and other relevant Good International Industry Practice (GIIP) including relevant WHO guidelines in a manner satisfactory to the Bank.

Relevant legal instruments in Jordan

Public Health Law No. 47 of 2008 and its amendments:
Article (46) of Chapter Ten (Chapter on Health Impairment) defines medical waste resulting from health care facilities as a health annoyance and dislocation; and Article (48) of the same law prohibits causing health dislocation.

Article (3-A-62) also stipulates penalties for those who violate the conditions related to the management of medical waste.

Medical Waste Management Instructions No. 1 of 2001 issued in the Official Gazette No. (4511) dated 16/1/2001: These instructions define the medical waste, the scope of the instruction. The instruction regulate medical wastes in its all stages of proper and safe handling

of wastes according to their classification (type) starting from the point of generation, to the colure coded plastic bags and containers, packing, storing, transporting, and ending with treatment either by incinerating or by using alternative environmental friendly techniques like autoclaving or microwaving and final disposal. These instructions set guidelines for all healthcare waste producers, which must be adhered to in order to protect public health.

Resolution of His Excellency the Minister of Health in his book No28/1917 dated 17/9/2013. The decision clarifies item (5-6) of Medical Waste Management Instructions No. 2001/1 related to the period of medical waste storage and defines classification for health care facilities that produce high quantities of medical waste and the one that produce small amount of medical waste.

Environmental Protection Law No. (6) of 2017: Article (3) states that the Ministry of Environment is the authority responsible for protecting the environment in the Kingdom

Air Protection Regulation No. (28) for the year 2005 issued under the Environmental Protection Law, governs the activities that emit pollutants into the ambient air.

Regulation for the Management of Hazardous Substances, Transport and Handling No. 24 of 2005.

Instructions for managing and handling hazardous wastes for the year 2003

Management of harmful and hazardous materials Bylaw, 43/1999.

Jordanian Standard 286/2008. Technical Regulations on Drinking Water

Jordanian Standard 893/2006. Reclaimed Domestic Wastewater.

Three Jordanian Standard 202/1991. Industrial Wastewater. The standard sets norms for the release of industrial wastewater to the environment.

1. **Jordanian Standard 1145/2006**. Uses of Treated Sludge in Agriculture
2. **Jordanian Standard 1189/2006**: maximum allowable limits of air pollutants emitted from stationary sources. These standards set emission limits for total suspended particulates by type of industry as well as gaseous substances and define acceptable measurement methods.
3. **Jordanian Standard 1140/2006**: Ambient air quality standards provide limits for ambient air quality for particulates (TSP and PM10) as well as gaseous substances (SO2, CO, NO2, H2S, and Pb)

World Bank ESS	Description of the relevant ESS
ESS4 Community Health and Safety	Addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable
ESS relevant to the ESCP of the project	

Relevant aspects of this standard shall be considered, as needed, under action 1.2 above, including, inter alia, measures to:

1. Minimize the potential for community exposure to communicable Diseases
2. Ensure that individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable, have access to the development benefits resulting from the Project
3. Manage the risks of labor influx; and prevent and respond to sexual exploitation and abuse, and sexual harassment

Relevant legal instruments in Jordan

Public Health Law No. 47 of 2008 and its amendments:

This Law consisting of 75 articles aims at regulating issues related to the public health system in the Kingdom of Jordan. The Law governs all professions related to public health and conditions and necessary procedures required for practicing in the medical profession. Art.4 states also that the Ministry of Health is the competent authority accountable for the protection of public health in the country. It is also responsible for monitoring the water and food quality to ensure its safety and adequacy for human consumption.

World Bank ESS	Description of the relevant ESS
ESS10 Stakeholder Engagement and Information Disclosure	Recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice.

ESS relevant to the ESCP of the project

Prepare, disclose, adopt, and implement a Stakeholder Engagement Plan (SEP) in line with the disclosed preliminary SEP, Jordan's Coronavirus Disease 2019 (COVID-19) preparedness and response plan (February 2020), the WHO guidance on "Risk communication and community engagement (RCCE) readiness and response to the 2019 novel coronavirus (2019-nCoV)" (January 26, 2020), and consistent with ESS10, in a manner acceptable to the Bank.

Accessible grievance arrangements shall be made publicly available to receive and facilitate resolution of concerns and grievances in relation to the Project, consistent with ESS10, in a manner acceptable to the Bank.

Relevant legal instruments in Jordan

National law recognizes the importance of accredited independent consultants or Environmental Non-Governmental Organizations ENGOs and environmentally concerned CBOs to be established according to law.

Other World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) relevant to the project are:

- **Technical Note**: Public Consultations and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings[2]

[2] http://documents1.worldbank.org/curated/en/278411585873572860/pdf/Stakeholder-Engagement-Plan-SEP-Central-African-Republic-COVID-19-Preparedness-Response-project-P173832.pdf

- **Interim Advice for IFC Clients on Preventing and Managing Health Risks of COVID-19 in the Workplace**, issued on April 6, 2020[3].
- **Interim Advice for IFC Clients on Supporting Workers in the Context of COVID-19**, issued on April 6, 2020[4].
- **WBG EHS Guidelines for Healthcare Facilities**, issued on April 30, 2007[5].

WHO resources include technical guidance which could be applied to the Project such as:

i. Laboratory biosafety[6]
ii. Infection prevention and control[7]
iii. Rights, roles and responsibilities of health workers, including key considerations for occupational safety and health[8]
iv. Water, sanitation, hygiene and waste management[9]
v. Quarantine of individuals[10]
vi. Rational use of PPE[11]
vii. Oxygen sources and distribution for COVID-19 treatment centers[12].

[3] https://www.ifc.org/wps/wcm/connect/2ab83243-0b50-4d80-a007-f96c4b589634/Tip+Sheet_Interim+Advice_OHS_COVID19_April2020.pdf?MOD=AJPERES&CVID=n7R2Q0P
[4] https://www.ifc.org/wps/wcm/connect/b27193d8-b024-4830-83cf-f93e931b240a/Tip+Sheet_Interim+Advice_Supporting+Workers_COVID19_April2020.pdf?MOD=AJPERES&CVID=n9s.6RO
[5] http://documents1.worldbank.org/curated/en/157871484635724258/pdf/112110-WP-Final-General-EHS-Guidelines.pdf
[6] https://www.who.int/csr/resources/publications/biosafety/Biosafety7.pdf
[7] https://www.who.int/infection-prevention/en/
[8] https://apps.who.int/iris/rest/bitstreams/1272583/retrieve
[9] https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-WASH-2020.4
[10] https://www.who.int/publications/i/item/considerations-for-quarantine-of-individuals-in-the-context-of-containment-for-coronavirus-disease-(covid-19)
[11] https://www.who.int/publications/i/item/rational-use-of-personal-protective-equipment-for-coronavirus-disease-(covid-19)-and-considerations-during-severe-shortages
[12] https://www.who.int/publications/i/item/oxygen-sources-and-distribution-for-covid-19-treatment-centres

4. Environmental and Social Baseline

Jordan covers an area of 89,318 km^2, where land constitutes 88,802 Km^2, and 540 Km^2 is covered by water including 26km long coastline of the Gulf of Aqaba (Al Tawaha et al, 2019[13]; MOE, 2014[14]; Disi et al, 2001[15]). The altitude varies from -430 m at the surface of the Dead Sea (the lowest point on earth) to 1,854 m of Jabal Umm ad Dami. Generally, around 90% of Jordan's land is arid to semi-arid, and the rainy season extends from October to May with 80% of the seasonal rainfall occurs through the months of December to March (TNC, 2014[16]). The annual average rainfall ranges between 600 mm in the northern uplands and less than 50 mm in the southern and eastern desert areas. About 90% of the country receives less than 150 mm\season. Most of the precipitation falls in the form of rain or drizzle, snow may fall on highlands, and hail is frequent during thunderstorms.

Four bio-geographical zones were reported in Jordan, which are the Mediterranean, Irano-Turanian, Saharo-Arabian and the Sudanian penetration zone[17]. The Mediterranean extends from Yarmouk at the most northern part of Jordan until Naqab in the south. This region is characterized an annual rainfall range from 300-600mm, a minimum annual temperature varies from 5-10ºC, mean annual maximum from 20-30ºC and an altitude ranges from 700-1850m above sea level. This region is comprising the most fertile part of Jordan due to the existence of the red Mediterranean soil (terra rosa) and the yellow Mediterranean soil (rendzina). The Irano-Turanian is a narrow strip of variable width that surrounds all the Mediterranean except in the north. The vegetation is mainly small shrubs and bushes, and the altitudes range from 500-700 m. Rainfall varies between 150-300 mm, with mean annual minimum temperatures of 5-2ºC, and mean annual maximum from 15-25º C. Soil is mostly calcareous or transported by wind. The Saharo-Arabian (eastern desert or Badia) is the largest part of Jordan, and encompass almost 80% of its total area. The area is characterized by a mean annual rainfall ranges from 50-200mm, mean annual minimum temperatures of 15-2ºC and a mean annual maximum range from 25-40ºC. The elevation ranges between 500-700 m, and soil is poor, either clay, hamada, saline, sandy or calcareous. The Sudanian starts from the Dead Sea until the tip of the Gulf of Aqaba in the south along the Dead Sea depression and Wadi Araba. Rainfall ranges from 50-100mm, the mean annual minimum temperature ranges from 10-29º C, and mean annual maximum temperatures range from the minimal 20 to 35º C. Soils are mostly alluvial, saline, sandy and granitic.

The vegetation types is divided according to the biogeographical zones[18] of Jordan to six vegetation types are representing the Mediterranean zone, and these are the 1) Pine forest *Pinus halepensis*, 2) Evergreen oak forest *Quercus caliprinos*, 3) deciduous oak forest *Quercus aegilops*, 4) Juniper forest *Juniperus phoenicea*, 5) Hydric *Arundo donax* and the 6) degraded non-forest. The Irano-Turanian zone contains two vegetation types, which are the 1) Steppe *Retama reatum*

[13] Al Tawaha, M., Benzoni, F., Eid, E and Abu Awali, A. 2019. The Hard Corals of Jordan; a Field Guide. The Royal Marine Conservation Society of Jordan. Amman, Jordan. ISBN: 978-9957-8740-4-9. 400pp

[14] Anonymous. 2014. Jordanian Fifth National Report on the Implementation of the Convention on Biological Diversity. Ministry of Environment, Amman, Jordan.

[15] Disi, A.M.; Modry, D.; Necas, P. and Rifai, L. (2001): Amphibians and reptiles of the Hashemite Kingdom of Jordan. - Edition Chimaira, Frankfurt, 408 pp.

[16] Anonymous. 2014. Third National Communication Report on Climate Change (TNC). Ministry of Environment, Amman, Jordan

[17] Jordan Country Study 2000a, 2000b; GCEP 1998; Disi and Amr 1989; Al-Eisawi 1985, 1996; Long 1957; Kasapligil, 1956

[18] Jordan's Fifth National Report on the Implementation of the Convention on Biological Diversity, Ministry of Environment, 2014 and Al-Eisawi, 1996

and 2) Hydric *Phgramites australis*. Seven vegetation types are observed in the Saharo-Arabian zone, including 1) Gravel Hamada *Anabasis articulate*, 2) Runoff Hamada *Retama reatum, Artimesia herba-alba, Achillea fragrrantissima,* 3) Pebbles Hamada (Basalt) *Diplotaxis harrah, Jenandris iris, Achillea fragrantissima, Aronsonia factoroviski*, 4) Playa (Bjaha) *Halochnemum strobilaceum, Sueda fruticosa, Haplo phylum amplixicausle,* 5) Salines or Oasis *Nitraia retusa, Tamarix passarinoides,* 6) Hydric fresh *Phragmitis australis, Typha anguistifolia, Juncus actuaus* and 7) Hydric saline: *Limoium purinosum*. Finally, the Tropical (Sudanian penetration) contains four vegetation types and these are: 1) Sandy dunes *Haloxylon persica, Panicum turgidem,* 2) Saline *Nitraria retusa, Juncus maritimus*, 3) Rocky *Acacia tortillis* and 4) Hydric *Tamarix jordanica, Mauringa peregrine, Capparis deciduea, Salvadora persicum*

According to a study released by the Department of Statistics (DOS) in, July 10, 2019, the population of Jordan rose from about 586,000 people in 1952 to 10.309 million until the end of 2018.Jordan witnessed sharp demographic transitions during the second half of the last century that affected the age structure of the population. During 1952-2018, the crude death rate decreased from 22% in 1952 to 6.0% in 2018 with a percentage of 72%. The infant mortality rate dropped at the same time period from about 122 per every 1,000 in 1952 to 17 in 2018.

The economic factors also played a role in this decline, especially through the increase in the proportion of females in the labor force, where it reached 15.4% in 2018. On the other hand, the education sector in Jordan has achieved great progress, with illiteracy rates dropping from 16.7% in 1991 to 5.1% in 2018. School enrollment has also increased to 96.7% for the academic year 2017/2018.

Detailed baseline information on the health care sector and capacity, including infection control and medical waste management in the country are provided in Annex VI: Infection Control and Waste Management Plan (ICWMP).

5. Potential Environmental and Social Risks and Mitigation

5.1 The World Bank Environmental and Social Standard and Project Risk Classification

This project is expected to have positive environmental and social impacts since it was developed to respond and mitigate to the threat posed by COVID-19 pandemic. In addition, it will aid the MOH in proper segregation and treatment of medical waste in general and to those medical waste related to COVID 19 in particular in an environmental- friendly manner. Furthermore, this project will support to integrate health care waste management in infection control policies, and routine inspection especially in health emergencies and outbreaks. Both the environment and social risks are rated as 'Substantial' by the World Bank. The following rationale, is providing a tentative overview to justify the World Bank categorization of this project in line with the World Bank's Environmental and Social Policy and the ESF.

5.1.1 ESS 1 - Assessment and Management of Environmental and Social Risks and Impacts

The project design is expected to foster improved coordination efforts, cost efficiency gains, and create harmonization of policies and procedures for health preparedness during emergencies. The project components were designed to increase epidemiological investigation and samples all over the kingdom, which will assess health system to contain the viruses and suspected cases. This will enable the MOH to better manage disease outbreaks and develop harmonized policy regulation to facilitate smoother coordination between involved stakeholder and timely action. The project activities will raise capacities toward epidemiological investigation, transporting samples, handling HCW, and treatment of HCW. Environmentally and socially sound health facilities management will require adequate provisions for minimization of occupational health and safety risks, proper management of hazardous waste and sharps, use of appropriate disinfectants, proper quarantine procedure for COVID-19, appropriate chemical and infectious substance handling and transportation procedures, etc.

To mitigate these risks, the Ministry of Health (MoH) has prepared this Environmental and Social Management Framework (ESMF) that is connected with the Infection Control and Waste Management Plan (ICWMP) for each implementing facility and Environmental and Social Management Plans (ESMPs) for construction related works. The ICWMP will provide for the application of Guidelines developed by the MoH, but also WHO best practices in COVID-19 diagnostic testing and handling of the medical supplies and disposing of the generated waste. It is important to note that developing the ICWMP is applicable especially that two important documents have been developed by the MOH, which are the waste management plan and the guidelines for infection control.

Social risks are also expected and represented mainly by the risk of benefits sharing, and access facilities and services especially those poor and vulnerable groups such as elderly people, children and women. Therefore, the MOH will work closely under the guidance of WHO to distribute items needed to prevent, detect and clinically manage COVID-19 in a transparent and equitable manner. An appropriate stakeholder engagement plan will be developed to avoid conflicts resulting from false rumors, vulnerable groups not accessing services. To mitigate these risks MoH, in the ESCP, will commit to the provision of services and supplies based on the urgency of the need, in line with

the latest data related to the prevalence of the cases and according to the readiness of the ESMF. Beyond this, project implementation will also seek to ensure appropriate stakeholder engagement, proper awareness raising and timely information dissemination.

5.1.2 ESS 2 - Labor and Working Conditions

The Project shall be carried out in accordance with the applicable requirements of ESS2, in a manner acceptable to the Bank, including through, inter alia, implementing adequate occupational health and safety measures (including emergency preparedness and response measures), prohibiting child labor (for children under 18) due to the hazardous work environment, setting out grievance arrangements for Project workers, and incorporating labor requirements into the ESHS specifications of the procurement documents and contracts with contractors and supervising firms.

The Borrower shall implement the above measures in accordance with Labor Management Procedures (LMP) to be adopted for the Project and WHO guidelines on COVID-19 in all facilities, including laboratories, quarantine and isolation centers, and screening posts, in a manner acceptable to the Bank and consistent with ESS2.

Health workers hired by the MOH will conduct most of the project activities, which make them more exposed to the risk of contamination with COVID-19. The project will ensure the application of OHS measures as outlined in WHO guidelines which are captured in this ESMF and these include:

- Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected, issued on March 19, 2020[19]
- Infection prevention and control at health care facilities (with a focus on settings with limited resources), issued in 2018[20]
- Laboratory biosafety guidance related to coronavirus disease 2019 (COVID-19), issued on March 18, 2020[21]
- Infection Prevention and Control for the safe management of a dead body in the context of COVID-19, issued on March 24, 2020[22]
- 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[23]
- Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19), issued on February 27, 2020[24]
- Water, sanitation, hygiene and waste management for COVID-19, issued on March 19, 2020[25]
- Safe management of wastes from health-care activities, issued in 2014[26]

[19] https://www.who.int/publications/i/item/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125
[20] https://www.who.int/infection-prevention/tools/core-components/facility-manual.pdf
[21] https://www.who.int/publications/i/item/laboratory-biosafety-guidance-related-to-coronavirus-disease-2019-(covid-19)
[22] https://apps.who.int/iris/bitstream/handle/10665/331538/WHO-COVID-19-IPC_DBMgmt-2020.1-eng.pdf
[23] https://www.who.int/publications/i/item/coronavirus-disease-(covid-19)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health
[24] https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IPCPPE_use-2020.1-eng.pdf
[25] https://www.who.int/publications/i/item/water-sanitation-hygiene-and-waste-management-for-covid-19
[26] https://apps.who.int/iris/bitstream/handle/10665/85349/9789241548564_eng.pdf?sequence=1

This encompasses procedures for entry into health care facilities, including:

1. Minimize visitors and undergoing strict checks before entering
2. Procedures for protection of workers in relation to infection control precautions
3. Provision of immediate and ongoing training on the procedures to all categories of workers, and post signage in all public spaces mandating hand hygiene and personal protective equipment (PPE)
4. Ensuring adequate supplies of PPE (particularly facemask, gowns, gloves, handwashing soap and sanitizer)
5. Integrate on a regular basis the latest guidance by WHO as it develops over time and experience addressing COVID-19 globally.

5.1.3 ESS 3 - Resource and Efficiency, Pollution Prevention and Management

Medical wastes and chemical wastes (including water, reagents, infected materials, etc.) from the labs, quarantine, and screening posts to be supported (drugs, supplies and medical equipment) can have significant impact on environment and human health. Wastes that may be generated from medical facilities/ labs could include liquid contaminated waste, chemicals and other hazardous materials, and other waste from labs and quarantine and isolation centers including of sharps, used in diagnosis and treatment. Each beneficiary medical facility/lab, following the requirements of the ESMF for the Project, WHO COVID-19 guidance documents, the World Bank Group Environmental Health and Safety Guidelines for Waste Management Facilities and other best international practices. The health care centers will adopt and develop ICWMPs based on the existing documents of waste management plan and the guideline for infection control available at the MOH to prevent or minimize such adverse impacts.

5.1.4 ESS 4 - Community Health and Safety

Safety of communities from infection with COVID-19 is of great importance to the Government of Jordan. Therefore, medical wastes and general waste from the labs, health centers, and quarantine and isolation centers have a high potential of carrying micro-organisms that can infect the community at large if they are not properly disposed. There is a possibility for the infectious microorganism to be introduced into the environment if not well contained within the laboratory or due to accidents/emergencies. The health care center developed ICWMP (Annex VI) therefore describes:

- How project activities will be carried out in a safe manner with (low) incidences of accidents and incidents in line with Good International Industry Practice (WHO guidelines)
- Measures in place to prevent or minimize the spread of infectious diseases; and
- Emergency preparedness measures.

Laboratories, quarantine and isolation centers, and screening posts, will thereby have to follow respective procedures with a focus on appropriate waste management of contaminated materials as well as protocols on the transport of samples and workers cleaning before leaving the workplace back into their communities.

The project is operating within a context that may give rise to the risk of Gender-Based Violence. Evidence suggests incidents of gender-based violence have increased since the COVID-19 outbreak, particularly inter-partner violence in domestic settings under social distancing and quarantine requirements. The ESMF includes and appropriate preventive measures such as codes of professional conduct. The GRM, elaborated in the SEP, includes referral protocols to GBV service providers.

It is important to highlight that COVID-19 treatment and accessibility is granted for all Jordanian, refugees and visitors in the governmental hospitals and facilities and for free. The security personnel of the MOH are civilian and does not carry any weapons. An agreement signed between the MOH and the Military Contractors Association in order to provide the needed support to this fragile group of people and provide them with appropriate job to sustain their livelihood. Therefore, although not armed and they do no sanction any use of force, but they are capable to adhere to the hospitals rules and guidelines.

5.1.5 ESS 10 - Stakeholder Engagement and Information Disclosure

The Project includes a standalone stakeholder engagement plan (SEP) that is based on meaningful consultation and disclosure of appropriate information, considering the specific challenges associated with combating COVID-19. Specifically, the SEP includes strategies that will be adopted during the entire project cycle to disclose information relating to the project to different groups of stakeholders, receive feedback from them, while also attending to the particular challenges with engaging marginalized and vulnerable social groups such as foreign workers, tourists and persons with disabilities, people in remote or inaccessible areas, etc. Further, as laid out in the SEP, people affected by or otherwise involved in project-supported activities, including different types of health care workers, will be provided with accessible and inclusive means to raise concerns or lodge complaints, via the Grievance Redress Mechanism (GRM).

5.2 Environment and Social Risks and Mitigation

The following illustrates the mitigation measures, which will be applied to cope with the potential risks identified above over the project period

5.2.1 Planning and Design Phase

This section describes expected project impacts and potential mitigation measures to be addressed at the planning and design phase

(i) **Procurement of goods and supplies:** Several risks are associated with the procurement, including:

1. Increased prices due to high global demand; supply shortages/stock out; manufacturers shutdown (e.g. quarantined factory workers/factory closure, etc.).
2. Transportation disruptions, export controls in countries due to domestic consumptions, etc.
3. Inadequate procurement capacity in the MOH to handle the emergency nature of the COVID-19 crisis
4. The limited capacity of the market and supply chain to meet the demand

5. Managing fraud and corruption that might happen during the procurement process of goods and services. This is resolved following a clear procurement plan that is attached to the Governmental procedures and guidelines.

5.2.2 Location, type and scale of healthcare facilities and associated waste management facilities, including waste transport routes.

- **Location of facilities**: Al-Basheer hospital is not close and is not situated in the proximity of any sensitive areas such as a cultural heritage site or a nature reserve. However, it is situated close to a residential area, which is well served by the municipal of Amman including public water supply, sewage and waste collection services.
- **Type and scale of facilities**: this has been provided extensively in section "1.2.3.3 Storage and Segregation of Waste in Al-Bashir hospital" above.
- **Quarantine and isolation centers**: currently, there is no quarantine locations but all COVID-19 cases are requested to guarantee themselves at home following the MOH procedures.

The Project will ensure the proper design and functional layout of healthcare facilities, which may involve several aspects: i) structural and equipment safety; ii) waste segregation, storage and processing, and iii) waste that needs to be managed with an incinerator. In addition, the project will take into consideration of the need for differentiated treatment for different users of the facilities, especially of vulnerable groups, women and children.

Wastes that may be generated from medical facilities/ labs could include liquid contaminated waste, sharps, chemicals and other hazardous materials used in diagnosis and treatment. Each beneficiary medical facility/lab should implement appropriate measures and following the requirements of the waste management plan to be adopted for the project. In order to mitigate these risks, the following measures will be applied

1. Procure goods and supplies based on technical specifications provided by WHO interim guidance for coronavirus disease 2019
2. Given the emergency nature of the project and the supply chain constraints due to global pandemic crisis, the MOH may leverage existing arrangements by directly contracting UN agencies to supply major medical equipment and supplies. If requested by MOH, the WBG may provide Bank Facilitated Procurement (BFP) to proactively assist in accessing existing supply chains for the agreed list of critical medical consumables and equipment needed under the project
3. Recruitment of a qualified and experienced Procurement Officer familiar with WBG procurement regulations. The possibility of immediately reassigning existing staff with the minimum qualifications and experience to support procurement under the project will be discussed with the MOH. The WBG team will maintain close follow-up and quality control of procurement/contract management matters during project implementation to ensure the efficiency of procurement decisions
4. A Technical Audit will be required to verify the contracting approach, the appropriateness of prices, the adherence to agreed procurement procedures, the quality of the goods, whether these were delivered to the designated final destinations, and the appropriate use of funds for the intended purposes.

(ii) **Financial Management:** the following mitigation measures are recommended:

1. The FM arrangements were designed to mitigate the identified FM risks, which would suit the available capacity during implementation, including:
   - A part-time Finance Officer, experienced in WBG-funded projects and FM- and disbursement-related guidelines, will handle the FM and disbursement functions;
   - A budget line item for the project's estimated annual disbursements will be added to the 2020 (and onwards) national budget to ensure quick disbursements;
   - Different procurement modalities will be used to have a reasonable assurance over items pricing;
   - A US Dollar Designated Account (DA) managed by the MOH will be opened to receive advances;
   - Retroactive financing of 40 percent of the amount will be reimbursed to the government at a bank account of their choice that is different from the DA;
2. Submission of semi-annual IFRs will allow the WBG team to follow up on disbursement progress and address any bottlenecks on a timely basis in excel sheets;
3. A technical audit will verify the contracting approach, the appropriateness of prices, the adherence to agreed procurement procedures, the quality of the goods, whether these were delivered to the designated final destinations, and the appropriate use of funds for the intended purposes. The technical audit reports will be due for submission on a semi-annual basis;
4. Financial auditing of the project's annual financial statements by the Jordan Audit Bureau.

(iii) Medical waste management and disposal

The Environmental Health Department in the MoH will screen each HCF's medical waste management and disposal practices to determine if they are in keeping with the World Bank Group's EHS Guidelines and current WHO Guidelines for COVID-19. Through these mentorship visits, the MoH will ensure that where these measures are not being followed then technical backstopping or necessary equipment is provided. In order to mitigate any negative effects of medical waste management, the following will be applied

- Identification of current methods of medical waste management and disposal
- Identification of any on-site facilities for disposal of medical waste including incinerators, pits for burning medical waste, pits for burial of medical waste, etc.
- Identification of any off-site disposal of medical waste, including how material is gathered and stored, routes taken to the disposal facility, and disposal procedures
- Review of protocols for dealing with medical waste specifically related to infectious diseases like COVID-19
- Review of training procedures for healthcare workers and other relevant employees for medical waste management and disposal
- Audit any off-site waste disposal required on a monthly basis and institute any remedial measures required to ensure compliance
- Have policy and plan for medical waste management.
- Practice waste segregation, packaging, collection, storage disposal, and transport is conducted in compliance with WHO COVID-19 Guidelines;
- Have adequate plastic bags according to the color coded in the mentioned instructions.

- Onsite waste treatment will monitor regularly for validation of sterilization using biological indicators on a weekly basis.
- Quantities of medical waste generated should be registered including date and location of treatment.
- The EHD team will audit quantities of waste treated at any off-site waste commercial treatment unit and disposal on a monthly basis to ensure that all generated medical waste treated properly and there is no open dumping.
- Ensure activities started with regard the medical waste treatment unit found in the police station an Al-Bashir removed and site receive rehabilitation works and the autoclave reinstalled in another location.
- Implement cleaning and disinfection policies' of public spaces, wards, ICUs, laboratory equipment, tools, and waste and medical waste storage are in place and according to the policy of cleaning and disinfection.
- Ensure the availability of clean water and soap at hand washing and other sanitary stations are always supplied with clean water, soap, and disinfectant
- Ensure equipment such as autoclaves, BSL2 in laboratories and medical waste treatment unit are in working order.
- Ensure the medical waste transporting vehicle working in a good condition.
- Ensure that that health care workers, cleaning worker medical waste handling and treatment worker are provided with proper PPEs
- Ensure to cover the cleaning workers and medical waste handler, workers at medical waste treatment unit, drivers of medical waste transport vehicle with COVID 19 epidemiological investigation.
- Training and capacity building will to include cleaning workers and medical waste handler, workers at medical waste treatment unit, drivers of medical waste transport vehicle on tropics related to their work.
- Training program to include Medical waste segregation topic

(iv) Protecting healthcare workers

Poor design of laboratories and healthcare centers that do not meet layout and engineering requirements for nosocomial infection control, could increase risk of spreading COVID-19 in health facilities, especially to healthcare workers. The mitigation measures which are proposed to adapt with protecting healthcare workers are:

- Determination if the design of facility meets the requirement of IPC in healthcare facilities and takes into account guidance from WHO and/or CDC on COVID- 19 management and infection control
- Determination if the design of laboratory should take into account guidance from WHO Laboratory biosafety guidance related to COVID- 19
- Determination if training given to healthcare workers and other employees is adequate
- Determination if adequate stores of PPE are available on-site
- Identify if healthcare workers shall be provided with medical personal protective equipment (PPE) includes: Medical mask, Gown, Apron, Eye protection (goggles or face shield), Respirator, Boots/closed work shoes

In addition, all healthcare centers have been identified in Table No.5 above (Page No.9 & 10 above) where their locations, scale and type have been identified. However, this project will aim to target Al-Basheir hospital which is considered the largest public hospital in Jordan, established in 1954, and located in East Amman. It encompasses 49 Buildings with approximately 1150 beds serves around 7000 patient per day. The hospital is located in a crowded residential area, thus it is not located near or close to any protected areas, water sources and critical ecosystems. The medical waste generated from the hospital is treated through an on- site treatment unit by autoclaving after shredding.

For the quarantine, people arriving to Jordan through the airport are quarantined at identified hotel and furnished caravans in the Dead Sea area, which are prepared or constructed for this purpose. People arriving to Jordan through terrestrial borders are quarantined at the same site and within a furnished caravans. All quarantined people are well-served with meals, water, juice…etc, and if a positive test of COVID-19 was identified, then the person will be moved with ambulance to the hospital. All workers were employed have been trained to practice cleaning and disinfection of caravans and waste collection sites and they are provided with needed PPE.

No hotels or other existing facilities are being acquired for quarantine purposes. No land acquisition is required or permitted under the project.

Finally, a manual of infection control policies and procedures in hospitals have been developed, including instruction for medical waste management in context of covid 19. This publication was issued in 2001, and it was made available for all relevant parties. This manual was part of the ICWMP (Annex VI).

5.2.2 Construction Phase

This project do not involve any constructing of any quarantine facilities, as it will be limited to supplying medical equipment's and retroactive financing. Therefore, no risks and mitigation measures have been added

5.1.3 Operational Phase

The main risks during operation phase are described in this section together with mitigation measures

(i) COVID-19 testing and diagnosis

Improper collection of samples and testing for COVID19 and appropriate laboratory biosafety could result in spread of disease to medical workers or laboratory workers, or even at population level during the transport of potentially affected samples. Mitigation measures are represented by the following:

1. Collection of samples, transport of samples and testing of the clinical specimens from patients meeting the suspect case definition should be performed in accordance with WHO interim guidance Laboratory testing for coronavirus disease 2019 (COVID-19) in suspected human cases.

2. Tests should be performed in appropriately equipped laboratories by staff trained in the relevant technical and safety procedures
3. Samples that are potentially infectious materials need to be handled and stored as described in WHO document Guidance to minimize risks for facilities collecting, handling or storing materials potentially infectious for polioviruses; and
4. For general laboratory biosafety guidelines, see the WHO Laboratory Biosafety Manual, 3rd edition

(ii) Containment of COVID-19

- Quarantine procedures for COVID-19 patients are maintained
- Patients in quarantine are not discriminated due to socioeconomic status, level of education, gender, disabilities and any other vulnerabilities. This was enforced by the capacity building provided for the responsible personnel.
- When practical, COVID-19 patients are given access to phone or other means of contact with family and friends to lessen the isolation of quarantine with no cost or any charges.
- Patients in quarantine have access to development and project related information and should be able to take part in consultation through appropriate means
- The public is regularly updated on the situation and reminded of protocols to prevent the spread of COVID-19
- Follow up the WHO quarantine guidelines[27]

(iii)Poor Management of Medical Waste

Improper collection, transport, treatment and disposal of infectious waste becomes a vector for the spread of the virus. The mitigation measures are:

1. Waste segregation, packaging, collection, storage disposal, and transport is conducted in compliance with the WHO COVID-19 Guidelines
2. Onsite waste management and disposal will be reviewed regularly and training on protocols conducted on a weekly basis
3. The treatment of healthcare waste produced during the care of COVID-19 patients should be collected safely in designated containers and bags, treated and then safely disposed
4. Open burning and incineration of medical wastes can result in emission of dioxins, furans and particulate matter, and result in unacceptable cancer risks (See ICWMP- Annex IV)

(iv)Poor handling and Management of Hazardous Materials

Hazardous materials used and generated during the provision of COVID-19 diagnosis, care and treatment services hazardous chemicals in the hospitals and health care centers are limited to small volumes of laboratory reagents, chemicals, solvents, medicinal gases etc. Mitigation measures are:

1. Develop a hazardous material management procedure that defines:
    - Inventory of hazardous materials in the health care centers
    - Proper labelling of hazardous materials

[27] https://apps.who.int/iris/rest/bitstreams/1272428/retrieve

- Safe handling, storage and use of hazardous materials
- Use of protective equipment procedure for managing spill, exposures and other incidents; and
- Procedure for reporting of incidents.

2. Hazardous materials should be handled in accordance with the accepted practices set in the ICWMP (Annex VI).
3. Only trained personnel should handle the materials and precautions taken when handling materials by using required protection equipment such as ventilation hoods and personal protective equipment

5.1.4 Social inclusion/vulnerability as a barrier to accessing treatment

The access to all governmental facilities related to the MOH is applicable to the all community members including refugees as well as visitors and for free. This include the ability of vulnerable communities such as people with disabilities or elderly whom can enjoy the free costs and full accessibility for COVID treatment. It is important to highlight that Al-Basheer hospital and other MOH facilities are prepared to accommodate all community members including disabled people.

5.1.5 Decommissioning

If any temporary health care center or medical waste management facilities will be established under the project, they will be decommissioned after the end of the outbreak is declared in accordance with regular decommissioning procedures and international best practice.

(i) Decommissioning of interim of quarantine facilities will lead to waste generation

Mitigation Measures are:

1. Any temporary quarantine facilities will be decommissioned on notice and will be demolished as per the demolition management guidelines as follows:
   - The demolition works shall not cause any nuisance by way of noise, dust and vibration to the surrounding environment
   - The site of works shall be fenced and screened to protect site from strong winds and to contain dust.
   - All hazardous wastes, including asbestos shall be disposed of as per the provisions laid out by the Ministry of Environmental
   - No debris shall be burned on the site.
2. The facility will be sprayed with disinfectant prior to demolition/dismantling and all demolition/dismantling waste will be managed as per the national laws and bylaws.
3. All workers partaking in these activities will adhere to the typical occupational health and safety requirements outlined in the construction stage section and at minimum ensure adequate PPE is worn, including helmets, boots, gloves and masks

(ii) Decommissioning of medical equipment

Mitigation Measures are: All medical equipment will be decommissioned as per the manufactures requirements and disposed where relevant in accordance with the manufacturer’s requirement

5.3 Project Environmental and Social Risks and Mitigations

Table 2: the project Environmental and Social Risks and Mitigations

SN	Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures	Responsibilities	Timeline
1	**Planning and Design Stage**			
1.1	Procurement of goods and supplies	Procure goods and services following the governmental procedure and the procurement plan	EHD-MOH	During design preparation and implementation
		Identify the capacity of the market and supply chain to meet the demand		
		Procure goods and supplies based on technical specifications provided by WHO interim guidance for coronavirus disease 2019		
		Given the emergency nature of the project and the supply chain constraints due to global pandemic crisis, the MOH may leverage existing arrangements by directly contracting UN agencies to supply major medical equipment and supplies. If requested by MOH, the WBG may provide Bank Facilitated Procurement (BFP) to proactively assist in accessing existing supply chains for the agreed list of critical medical consumables and equipment needed under the project		
		Recruitment of a qualified and experienced Procurement Officer familiar with WBG procurement regulations.		
		A Technical Audit will be required to verify the contracting approach, the appropriateness of prices, the adherence to agreed procurement procedures, the quality of the goods, whether these were delivered to the designated final destinations, and the appropriate use of funds for the intended purposes		
1.2	Location, type and scale of healthcare facilities and associated waste	Implement the ICWMP effectively (Annex VI)	EHD-MOH	During design preparation and implementation

	management facilities, including waste transport routes			
1.3	Financial Management	A part-time Finance Officer, experienced in WBG-funded projects and FM- and disbursement-related guidelines, will handle the FM and disbursement functions	EHD-MOH	During design preparation
		A budget line item for the project's estimated annual disbursements will be added to the 2020 (and onwards) national budget to ensure quick disbursements		
		A US Dollar Designated Account (DA) managed by the MOH will be opened to receive advances		
		Retroactive financing of 40 percent of the amount will be reimbursed to the government at a bank account of their choice that is different from the DA		
1.4	Medical waste management and disposal	Identification of current methods of medical waste management and disposal	EHD-MOH	During design preparation and implementation
		Identification of any on-site facilities for disposal of medical waste including incinerators, pits for burning medical waste, pits for burial of medical waste, etc.;		
		Identification of any off-site disposal of medical waste, including how material is gathered and stored, routes taken to the disposal facility, and disposal procedures;		
		Review of protocols for dealing with medical waste specifically related to infectious diseases like COVID-19;		
		Review of training procedures for healthcare workers and other relevant HCF employees for medical waste management and disposal		
		Audit any off-site waste disposal required on a monthly basis and institute any remedial measures required to ensure compliance		
		Compliance with the WBG General EHS guidelines and the "WBG EHS Guidelines for Heathcare Facilities		
		Have policy and plan for medical waste management	EHD-MOH	

		Practice waste segregation, packaging, collection, storage disposal, and transport is conducted in compliance with WHO COVID-19 Guidelines and the national instructions	Medical staff at the HCF	
		Have adequate plastic bags according to the color coded in the mentioned instructions	HCF, Services Directorate	
		Onsite waste treatment will monitor regularly for validation of sterilization using biological indicators on a weekly basis	EHD,HCF	
		Quantities of medical waste generated should be registered including date and location of treatment	HCF,EHD	
		The EHD team will audit quantities of waste treated at any off-site waste commercial treatment unit and disposal on a monthly basis to ensure that all generated medical waste treated properly and there is no open dumping	EHD	
		Ensure activities started with regard the medical waste treatment unit found in the police station an Al-Bashir removed and site receive rehabilitation works and the autoclave reinstalled in another location	EHD, Building and Maintenance Directorate	
		Implement cleaning and disinfection policies' of public spaces, wards, ICUs, laboratory equipment, tools, and waste and medical waste storage are in place and according to the policy of cleaning and disinfection	MoH, HCF	
		Ensure the availability of clean water and soap at hand washing and other sanitary stations are always supplied with clean water, soap, and disinfectant	MoH, HCF	
		Ensure equipment such as autoclaves, BSL2 in laboratories and medical waste treatment unit are in working order	EHD, Building and Maintenance	
		Ensure the medical waste transporting vehicle working in a good condition	EHD,HCF, Transportation Directorate	

		Ensure that that health care workers, cleaning worker medical waste handling and treatment worker are provided with proper PPEs	MOH, EHD	
		Ensure to cover the cleaning workers and medical waste handler, workers at medical waste treatment unit, drivers of medical waste transport vehicle with COVID 19 epidemiological investigation	CDD, MOH	
		Training and capacity building will to include cleaning workers and medical waste handler, workers at medical waste treatment unit, drivers of medical waste transport vehicle on tropics related to their work	EHD	
		Training program to include Medical waste segregation topic	EHD	
1.5	Protecting healthcare workers	Determination if the design of facility should to meet requirement for IPC in healthcare facilities and take into account guidance from WHO and/or CDC on COVID- 19 management and infection control	CDD,MOH, Lab. Directorate, HCF	During design preparation
		Determination if the design of laboratory should take into account guidance from WHO Laboratory biosafety guidance related to COVID- 19		
		Determination if training given to healthcare workers and other employees is adequate		
		Determination if adequate stores of PPE are available on-site		
		Identify if healthcare workers shall be provided with medical personal protective equipment (PPE) includes: Medical mask, Gown, Apron, Eye protection (goggles or face shield), Respirator, Boots/closed work shoes		
2	**Operation Stage**			
2.1	COVID-19 testing and diagnosis	Collection of samples, transport of samples and testing of the clinical specimens from patients meeting the suspect case definition should be performed in accordance with WHO interim guidance Laboratory testing for	MoH, CDD, HCF,Lab	During Operation

		coronavirus disease 2019 (COVID-19) in suspected human cases.		
		Tests should be performed in appropriately equipped laboratories by staff trained in the relevant technical and safety procedures		
		Samples that are potentially infectious materials need to be handled and stored as described in WHO document Guidance to minimize risks for facilities collecting, handling or storing materials potentially infectious for polioviruses		
		For general laboratory biosafety guidelines, see the WHO Laboratory Biosafety Manual, 3rd edition	Lab. Directorate	
2.2	Containment of COVID-19	Quarantine procedures for COVID-19 patients are maintained	MoH, CDD,HCF	During Operation
		Patients in quarantine are not discriminated due to socioeconomic status, level of education, gender, disabilities and any other vulnerabilities		
		When practical, COVID-19 patients are given access to phone or other means of contact with family and friends to lessen the isolation of quarantine		
		Patients in quarantine have access to development and project related information and should be able to take part in consultation through appropriate means		
		The public is regularly updated on the situation and reminded of protocols to prevent the spread of COVID-19		
		Follow up the WHO quarantine guidelines		
2.3	Poor Management of Medical Waste (See Annex VI)	Waste segregation, packaging, collection, storage disposal, and transport is conducted in compliance with the WHO COVID-19 Guidelines, and the national instructions	EHD, HCF	During Operation
		Onsite waste management and disposal will be reviewed regularly and training on protocols conducted on a weekly basis		

		The treatment of healthcare waste produced during the care of COVID-19 patients should be collected safely in designated containers and bags, treated and then safely disposed		
		Open burning and incineration of medical wastes can result in emission of dioxins, furans and particulate matter, and result in unacceptable cancer risks		
2.4	Poor handling and Management of Hazardous Materials (See Annex VI)	They develop a hazardous material management procedure	EHD-MOENV, HCF	During Operation
		Hazardous materials should be handled in accordance with the accepted practices.		
		Only trained personnel should handle the materials and precautions taken when handling materials by using required protection equipment such as ventilation hoods and personal protective equipment.		
		Management of medical waste should be in compliance with the WBG General EHS guidelines " and the "WBG EHS Guidelines for Heath care Facilities		
		Healthcare workers are at high risk of sharps injuries. Therefore, regular Hep B vaccine for healthcare workers should be secured. In addition, healthcare facilities should maintain stock of PEP in case of occupational HIV transmission from infected sharps to healthcare personnel		
3	Decommissioning Stage			
	Decommissioning of interim of quarantine facilities will lead to waste generation	Any temporary quarantine facilities will be decommissioned on notice and will be demolished as per the demolition management guidelines;	MoH, Services Directorate, HCF	During decommissioning
		The facility will be sprayed with disinfectant prior to demolition/dismantling and all demolition/dismantling waste will be managed as per the national laws and bylaws.		
		All workers partaking in these activities will adhere to the typical occupational health and safety requirements		

		outlined in the construction stage section and at minimum ensure adequate PPE is worn, including helmets, boots, gloves and masks.		
		All medical equipment will be decommissioned as per the manufactures requirements and disposed where relevant in accordance with the manufacturer's requirements.	Biomedical Engineering Directorate	During decommissioning

6. Procedure to Address Environmental and Social Issues

The Implementing Agency (MOH) is responsible for the overall implementation of the project through the EHD, which will have day to day responsibility for project management and support, including ensuring that project implementation is compliant with the World Bank's ESF, GoJ laws and regulations, Good International Industry Practice (GIIP); WHO COVID-19 Guidelines and this ESMF. The EHD will be adequately staffed (especially with an Environmental and a Social Specialist) to oversee the project's work and ensure that each HCF complies with all project procedures and receive professional implementation and project management support, including for procurement. EHD staffs will specifically oversee implementation of medical waste management and disposal systems as well as of general occupational health and safety issues for healthcare workers and minor civil works.

Implementation of this ESMF will include the following activities, to be undertaken by the EHD working closely with the individual HCFs:

1) **Screening**
   - All activities undertaken by the project will be screened using the form provides in the Annex II in order to exclude certain high or substantial risk activities, identify potential ES issues, and classify the ES risks. Copies of each of these screening forms will be kept at the EHD responsible staff members. The EHD periodic report to the Bank will include copies of each screening undertaken during the subject quarter.
   - The EHD will prepare and implement the necessary ES instruments for each of the activities financed under the project.
2) **Consultation and Disclosure**
   - Given the need for social distancing during the COVID-19 pandemic, stakeholder consultations for the ES instruments, will be conducted virtually whenever possible, as per instructions in the SEP. The SEP has identified key stakeholders and organized consultations for information exchange about the Project and its risks and impacts. All instruments will be disclosed on the MOH website with print copies also available at their offices and preferably with the EHD.
3) **Review and Approval**
   - The individual instruments will be prepared by EHD and will be reviewed and cleared by WB ES teams before they are implemented. Updates on the instruments will also be sent to WB for review, guidance, and comments.
4) **Implementation**
   - The EHD will be responsible for the implementation of the instruments.
5) **Monitoring and Reporting**
   - Monitoring and evaluation (M&E) activities will be the responsibility of the MOH. The MOH will ensure that project activity results are reported accurately and in a timely manner. The ICPMU at the MOH, with support from technical directorates, such as Communicable Disease Directorate, will be the primary responsible unit within the MOH to monitor and evaluate the progress towards achievement of the PDO and provide routine reporting to the WBG.
   - The WBG will conduct regular implementation support missions (including virtual missions while travel restriction remain in place). This is to: (a) review implementation progress, challenges and achievement of the PDO and intermediate indicators; (b)

provide support for any implementation issues that may arise; and (c) discuss relevant risks and mitigation measures.

7. Public Consultation and Disclosure

A public consultation workshop was conducted to discuss the ESMF document as well as to introduce the project objectives and components. All details on this workshop is available in Annex VIII.

8. Stakeholder Engagement

A Separate Stakeholder Engagement Plan SEP has been prepared for COVID-19 Project, that outlines the ways in which the project team will communicate with stakeholders and includes a mechanism by which people can raise concerns, provide feedback, or make complaints about project and any activities related to the project. The speed and urgency with which this project has been developed to meet the growing threat of COVID-19 in Jordan. Project will continue to coordinate with other Government agencies, NGOs, private sector, etc., as laid out in the SEP to receive additional feedback from stakeholders and use it to refine the approach, procedure and implementation arrangements of the project components. The SEP is still an internal document to the Bank and MoH, and is not yet disclosed publicly. In addition, once consultation is initiated, all comments will be considered/incorporated and draft version will be finalized and uploaded on the ministry website.

9. Grievance Redress Mechanism

The main objective of a Grievance Redress Mechanism (GRM) is to assist to resolve complaints and grievances in a timely, effective and efficient manner that satisfies all parties involved. Specifically, it provides a transparent and credible process for fair, effective and lasting outcomes. It also builds trust and cooperation as an integral component of broader community consultation that facilitates corrective actions. Specifically, the GRM:

- Provides affected people with avenues for making a complaint or resolving any dispute that may arise during the course of the implementation of projects;
- Ensures that appropriate and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants; and
- Avoids the need to resort to judicial proceedings.

Description of GRM

The Jordanian Ministry of Health (MoH) has a Grievance Redress Mechanism (GRM) in place under the main responsibility of the Complaints Section, created in 2008 within the Internal Control and Auditing Directorate, and reports directly to the Minister of Health. The GRM system is described as follows:

Organizational Structure:

The MoH has also developed two specific policies for handing complaints as follows:

1. Complaints received by the workers and employees in the health sector; and
2. Complaints received by the service recipients (the public)

Both policies set clearly the roles and responsibilities of persons/departments involved in the process of handling complaints and grievances. They also have clear procedures on how to submit a complaint, the steps of handling process, resolution and appeal details. This SEP will only cover the Service Recipient Complaints' procedures.

Service Recipient Complaints and Suggestions:

The Complaints Section at MoH has also developed a specific policy and procedures to handle the Service Recipient (the public) complaints and grievances. The Policy was developed to "establish a mechanism to manage complaints and suggestions from stakeholders", meant the public or the users of the MoH services.

- Objectives of the Policy:
- Defining one reference in the Ministry to handle complaints and suggestions.
- Determining the channels of communication and communication with the stakeholders.
- Establishing mechanisms for managing complaints (receiving, classification, analysis, feedback).

- **Definitions**: Stakeholders: the patients who visits the departments, directorates, hospitals and health centers of the MoH.

  - Reasons and types of complaints: The recipient of the service can submit a complaint to the Complaints Section / Directorate of Internal Control and Audit through the available channels in the following cases:
    - Submit any note that would improve the services' performance.
    - Dissatisfaction with the administrative, technical or medical services and procedures provided to him/her.
    - Abuse of service providers by employees.
    - The occurrence of excesses, mistakes, or lack of justice while providing him/her with the service.
    - Violating laws, regulations and instructions when providing the service to him/her.

GRM at PIU (Project Implementation Unit):

The Head of Complaints Section (HCS) is serving as the GRM Focal Point at the PIU level. All complaints received is handled by the HCS by conveying the message to those involved

Communication and Awareness Raising:

The Complaints Section does not have a "communication budget" per say but only depends on what they receive as promotional material from other sources such the Prime Ministry (At Your Service Platform). They also included the MoH hotline and the link to "at Your Service" platform at the Ministry's website for the public.

Training & Peers to Peers Learning:

The existing capacities at the Complaints Section at MoH are only two staff with a university degrees and different sets of skills. They both received a number of training courses in relation to GRM. Other staff who are also handling complaints and grievances as follows support these two staff:

- There are eight sections at the Internal Control and Auditing Directorate, which also handle and process complaints each in his relevant domain (Admin monitoring, nursing monitoring, Pharmacology monitoring, Technical monitoring, and Financial control). Admin control is the section that deals mainly with all workers complaints.
- There are also GRM external liaison officers: 32 at hospitals and 14 at the Health Directorates in governorates. They follow un on complaints sent by the central Complaints Section and ensure speedy handling of the related complaints.
- At Your Service and Hotline channels: Wissam and Sawsan are the liaison officers for these two uptake channels. In addition, within the platform and the hotline there are specific liaison officer for Health Insurance and the FDA -Food and Drug Administration (for complaints related to health insurance and drugs).

Moreover, the MoH has an Education and Training Directorate that oversees and identifies the training needs on yearly basis for each department at the Ministry, including the Complaints' Section. This training plan is prepared based on offers and agreements with other governmental agencies, which will be conducting the training activities for MoH staff

GRM Value Chain:

Uptake channels:

- The Complaints Section handles complaints and grievances which are normally received through different uptake channels: Complaints received through traditional/ classical channels: email: complaints@moh.gov.jo , face to face/ written complaints, fax (06-5658274), complaints' box at the MoH, phone operator at MoH, MoH website (www.moh.gov.jo complaints and suggestions page);
  - Complaints received through the Ministry's free Hotline (06/5004545) managed by the governmental National Communication Center (NCC); and
  - Complaints received through the "At Your Service" (be-Khedmetkum بخدمتكم) platform housed and managed by the Prime Ministry.

Number and types of complaints received:

Complaints are disaggregated according to the source of complaints (uptake channel through which they have been received) and according to their topics as follows:

Source of Complaints	**Total**	**Closed Complaints**	**Open Complaints**	**Resolution* (%)**
Complaints received through the MoH Hotline (2018)	1889	1700	189	89%

Complaints received through the MoH Hotline (2019)	3130	2635	495	84%
Complaints received through "At Your Service" platform (2019)	5230	4749	482	90%

"At Your Service" (be-Khedmetkum بخدمتكم) platform:

Complaints	**Queries**	**Suggestions**	**Compliments***
3395	1247	328	256

Types/topics of complaints:

Topic of complaint	**Total number received**	**Percentage (of total* received complaints)**
Slow/ complicated procedures of service delivery	2564	43%
Non- compliance with official hours of work	716	12%
Conduct and behavior of MoH staff	418	7%
Shortage of medications or supplies	429	7%
Complaints and queries about health insurance	436	8%
Complaints of food and drugs	560	10%
Smoking complaints	492	8%

Anonymous complaints:

The MoH has decided to accept and allow anonymous complaints, regardless of their topic. Anonymous complaints are being treated and handled in the same way as the normal complaints. Personal ID is not required anymore for accepting the complaint through the different intake channels. Nevertheless, "At Your Service" platform requires the submission of a phone number by the anonymous complainant in order to communicate the number of the complaint, handling timeframe and the resolution to him/her

Sorting and processing:

There is not one central database where all complaints are logged and categorized but this depends on the uptake-channel through which the complaint was received:

- At Your Service platform: complaints are logged into the; system and categorized electronically but under bigger headings like: complaint, query. Compliment, etc. The complaints are then print out and sent to the director of hospital or health center for feedback. Once the feedback is received and is acceptable, they log it into the system to be sent to the complainant. So complaints and feedback (resolution) are kept electronically within the platform.

- Hotline: complaints are received by email from NCC and print out for handling or they call the director of hospital or health center directly to get the feedback. Once received, the feedback is logged in the emails and the NCC sends the feedback through SMS (short phone messages) to the phone number of the complainant. The Hotline categorizes complaints by their topic and they are logged into the NCC electronic system where they are also tracked and documented after resolution.
- Traditional/Classical intake channels (as above): Complaints are logged and registered manually as well as electronically (at the Secretariat Internal Control and Auditing Directorate). They are also categorized according to their topic as shown above in Table # 3. The feedback is not communicated to the complainant through these channels unless he/she asks for it. For complaints of health workers received through official letters, the feedback is also sent back to them by official letters.

For some very specific complaints, a specialized committee is formed based on the seriousness of the complaint for investigation or the complaint is sent directly to the Minister of Health or the Secretary General for urgent handling and feedback. The feedback is then sent directly to the complainant through the agreed communication channel with him/her.
Several complaints are also handled and being referred to other parties other than central MoH. These include: medical facilities working under MoH such as Hospitals, health Directors/ Health Directorates, health centers, many central departments at central MoH), Family Protection Department (Police), private hospitals, refugees, etc.

Acknowledgement and follow up:

Depending on the uptake channel through which the complaint was received:

- At Your Service platform: once the complaint is submitted, the complainant receives at once an SMS on his phone including a tracking number, the estimated time for resolution, and the resolution itself once reached. After resolution, the system runs a "satisfaction survey" and requests the feedback of the complainant in regards to the process. In case the complainant was not satisfied with the solution, the complaint could be reopened to be studied and investigated again.
- Hotline: The system sends an SMS to the complainant with the complaint tracking number and the resolution once reached.
- Traditional/Classical intake channels: the complainants are not notified of the reception and logging of their complaints and they are not always notified of the resolution unless they ask about it.

No updates are provided to the complainants during the process and this is common among all uptake channels (electronic as well as classic ones). Complaints, for which a committee has been formed for investigation they are not bound with a time frame but normally could take between two weeks to two months.

Verify, Investigate & Act:

The MoH has formed a special permanent committee to look into the complaints submitted by the service recipients (the public), which is also in charge of identifying solutions and enhancements to the MoH services to reduce the number of recurrent complaints.
The Committee is composed of the following members:

- Director of the internal Control and Audit Directorate
- Director of the Quality Assurance and Institutional Development Directorate
- Director of the Pharmacology and Clinical Pharmacology Directorate
- Director of the Procurement and Supply Directorate
- Director of the Nursing Directorate
- Director of the Hospitality Directorate

- Procedures for opening and handling complaints and suggestions received through the Complaints and Suggestions box at the Ministry:

- The box is opened twice a month by the Head of the Complaints' Section accompanied by another staff of the Internal Control and Audit Directorate at the Ministry. The complaints are then recorded on a special register (the incoming mail at the Secretariat of the Internal Control and Audit Directorate, where it receives a tracking number and is classified in preparation for study and analysis;
- The person who submitted the complaint or the suggestion will be notified of the response via phone or e-mail after completing the procedures. In reality, the complainant is not notified of the resolution unless he asks about it.
- The complainant can follow up on his suggestion or complaint by contacting the Complaints Section of the Ministry at number 06-5200250 or via e-mail: complaints@moh.gov.jo.

- Procedures for handling complaints received through other uptake channels:
After receiving complaints from various uptake channels (in writing, electronically, by phone) and documenting them, the following procedures will take place:

- Study the complaint (in terms of verifying the validity of the information, data and documents attached to the complaint, and inquiring about it with the relevant authorities related to the complaint);
- Ensure that the complaint is consistent with the laws, regulations and instructions that govern work procedures in the MoH;
- In some special cases, the Minister of Health forms committees to verify and investigate the subject of complaints, and the committee's report and recommendations are submitted to the Minister for approval and then implementation;
- Inform the complainant or the relevant authority (according to the source of complaint) of the result of his/her complaint;
- Close the complaint (according to its type, either manually by saving it in the archive of the Directorate of Internal Control and Auditing in the classified files, or electronically if received via e-mail);
- Submit reports to the Minister summarizing main issues of complaints, along with suggested recommendations for improvement.

The Escalation process:

Any service recipient who submitted a complaint has the right to object to the resolution reached by the MoH and submit an objection to the party concerned with the topic of his objection. Once the objection is received, an investigation takes place and the complaint is reopened. Investigation could follow one of the following procedures:

- The Complaints Section addresses the concerned party within MoH for feedback and collecting data and facts;
- A Committee is formed to investigate the complaint. This measure is taken based on the importance and seriousness of the topic of complaint;
- A team from the Ministry (Internal Control and Auditing Directorate) is sent to location to investigate the facts on site; or
- The objection is not taken into consideration in case the complainant did not provide supporting information and facts justifying the reopening of the complaint and investigation.

In case of a medical complaint, the MoH has formed a specific Higher Medical Committee in 2018 for "medical questioning" to preserve the financial and compensation rights of the complainants. This action was implemented in order to avoid dealing with courts and judicial procedures.

Gender- Based Violence (GBV):

Complaints related to sexual harassment (mainly for women) are very rarely reported. In case of GBV complaints, they will be handled by the following departments: Domestic Violence Section (housed at the Mother and Child Health Directorate), the Human Rights Section (Legal Department), and the Family Protection Department of the Police. A committee will also be established with the relevant members to handle the complaint. GBV complaints were only submitted in writing until recently when direct complaints were allowed to be submitted to the Minister's office, through the Ministry's hotline or through the "At Your Service" platform.

GRM for Refugee Camps:

All refugees in the country are treated like any citizen or resident of the country. They all have access to the same uptake channels to submit their complaints against any of the facilities operating under the MoH or its staff. Syrian refugees in camps (and outside camps) can submit complaints like anyone else in the country against MoH services through all available uptake channels. However, the Complaints section does not have any mechanism to recognize and differentiate complaints received from Syrian refugees (or others) unless the person comes to the MoH and submits written complaint and provide a copy of his ID. The GRM records at MoH include complaints submitted by Syrian refugees related to the services provided by certain MoH health facilities or against some of its staff.

Monitoring & Evaluation:

The complaints are documented manually and electronically and feedback data is being kept, analyzed and the Complaints Section reports results on regular basis. Periodic reports are usually sent to the Minister of Health and the Secretary General (SG) of the Ministry, with specific statistics on received complaints and grievances including: Number of complaints, % of resolved

and unresolved ones, recurrent topic with the highest number of complaints, geographic location (which hospital and in what area), etc.

The objective of the exercise is to come up with solutions to reduce the number of recurrent complaints and introduce improvements to the process and procedures.
This also depends on the uptake channels through which the complaints were received:

- At Your Service platform: all complaints are documented and saved within the electronic system of the platform. As required, the platform generates different reports with different data regarding all documented complaints;
- Hotline: at the end of every month, a report is sent by NCC to the Complaints' Section with different statistics about received complaints including: the total number, types/topics, % of resolved and unresolved ones, % of those that are being handled, recurrent topics, etc.
- Traditional/Classic (official letters, fax, direct written complaints, phone, etc.): once the complaint is closed it is kept at the Archives of the Internal Control and Auditing Directorate which are afterwards analyzed by the Complaints Section.

The existing GRM system at MoH is assessed and reviewed by the Prime Ministry (more specifically in relation to the At Your Service platform) according to a set of criteria such as: time for resolution, quality of resolution, number of times of escalation, % of closed complaints, were there any measures to reduce number of complaints especially the recurrent ones, etc.).

Provide Response (to GRM Users): This depends on the uptake channel:

- At Your Service platform: Complainants receive an SMS with a tracking number, estimated time for resolution, and the resolution itself once reached. During these stages no feedback is provided to the complainant. The system also allows the users to rate the resolution and can complete the satisfaction survey.
- Hotline: Complainants receive an SMS with a tracking number they receive the resolution itself once reached. During these stages no feedback is provided to the complainant. The complainant can't rate the resolution or the process. No satisfaction survey is available.
- Traditional/Classical intake channels: Complainants are not informed of the procedures taken nor the resolution unless they ask about it. No information is given during the process about procedures taken in regards to their complaints. The complainant can't rate the resolution or the process. No satisfaction survey is available.

The governmental electronic platform At Your Service analyzes the data and if satisfaction is less than 75% they request the different institutions to improve their measures in regards to service quality and provide more convincing and satisfactory resolutions to complainants (with improved measures). The Quality Assurance and Institutional Development Directorate does administer a satisfaction survey for health workers and service recipient. The survey includes several sections including satisfaction about the existing GRM. According to the Head of the Complaints' Section, results were always good but no satisfaction percentage (%) is available.

10. Project Implementation Arrangements, Responsibilities and Capacity Building

The MOH is the implementing agency and responsible for the overall implementation and fiduciary responsibilities for the project. The International Coordination and Project Management

Unit (ICPMU) at the MOH will be the unit responsible for project management and coordination. The ICPMU is headed by a Director and reports directly to H.E. the Minister of Health for guidance and approval. Specifically, the ICPMU will plan, implement and monitor progress of the project implementation with relevant technical directorates within the MOH, such as Biomedical Engineering, Communicable Disease, Financial Services, Laboratory, and Purchase and Supplies Directorates.

Environmental and social safeguards focal points have been identified from relevant directorates within the MOH (Environmental Health, Health Communication and Awareness and Complaint Directorates) to ensure the proposed activities are implemented in compliance with the national and the WBG's environmental and social frameworks. Environmental and social experts will also be recruited to support the MOH safeguards focal points.

The ESMF is the overarching document for the screening of environmental and social risks and impacts, including the preparation and consultation of documentation and instruments, and monitoring the implementation of the ESMP, LMP, SEP, ICMWMP, etc. A clear delineation of responsibilities is determined in the ESMF and will be reflected in the relevant instruments. As established in the Environmental and Social Commitment Plan (ESCP), the MOH will establish and maintain a Project Management Unit with qualified staff and resources to support management of ESHS risks and impacts of the Project including environmental and social specialists.

Training Activities: Training topics for personnel involved in project implementation will include:

- All Health care workers at different hospital departments will be targeted for the infection and prevention control training programs. These programs were conducted in early project phases (first three months)

Training will be conducted in a way that ensures equal participation of both female and male to as much as reasonably practical through the MOH experienced staff members.

١١ ESMF Implementation Budget

ESMF implementation costs are allocated according to the budget line items in table 3 below

Table 3: ESMF implementation cost

ESMF Implementation Costs	USD
Training and workshops	
• Training on E&S good practice during the lifetime of the project • Training on ICWMP • Workshops - OHS for project workers and raising awareness campaigns	100,000
Information and Communication	
Production and dissemination of communication materials targeting the vulnerable groups	20,000
Supervision, monitoring, and reporting	
1. Travel to for training and conducting monitoring and reporting	20,000

2.	Monitoring including preparation of monitoring report for application of the ESMF and ICMWMP	
TOTAL		**140,000**

١٢. List of Annexes

1. Abbreviations and Acronyms
2. Screening Form for Potential Environmental and Social Issues
3. ESMP Template
4. Project Procurement List
5. Resource List: COVID-19 Guidance
6. Infection Control and Waste Management Plan (ICWMP)
7. Template TORs for Third Party Monitoring
8. Public Consultation Workshop

Annex I: Abbreviations and Acronyms

BP	Bank Procedures
BAT	Best Available Technology
COVID-19	Coronavirus disease 2019
CDC	Centers for Disease Control and Prevention
DOT	Department of transport United States of America
EHD	Environmental Health Directorate
EIA	Environmental Impact Assessment
EMD	Environmental Monitoring Division
ESIA	Environmental and Social Impact Assessment
ESHS	Environmental, Social, Health and Safety
ESMF	Environmental and Social Management Framework
ESCP	Environmental and Social Commitment Plan
E-Waste	Electronic waste
FDA	Food and Drug Administration
GAM	Greater Amman Municipality
GEF	The Global Environment Facility
GDP	Gross domestic product
GHG	Green House Gases
GIZ	German International Cooperation
HCAC	The Health Care Accreditation Council
HCW	Health care waste (medical waste)
HCC	Health care centers
HHC	The Higher Health Council
HIV	The human immunodeficiency viruses
KG	Quantities expressed in terms in kilogram
Ton	Quantities expressed in terms in tones
MCM	Million cubic meters
M&E	Monitoring and evaluation
MOE	Ministry of Environment
MOH	Jordan Ministry of Health
MSW	Municipal solid waste
MSWM	Municipal solid waste Management
POPs	Persistent Organic pollutants
PCDDs /f	Polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans (PCDFs)
PPE	Personal Protective Equipment
RMS	Royal Medical Services
TB	Tuberculosis
TOR	Term of References
UNDP	United Nations for Development programs
UNEP	United Nations Environment
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees

UNRWA	United Nations Relief and Works Agency for Palestinian refugees in the near east
WBG	World Bank Group
WTE	Waste-to-Energy
WHO	World Health Organization
WB	World Bank
WWTP	Wastewater treatment plant
ICWMP	Infection Control and Waste Management Plan
ESMP	Environmental and Social Management Plan

Annex II: Screening Form for Potential Environmental and Social Issues Template

This form is to be used by the Project Management Unit (PMU) to screen for the potential environmental and social risks and impacts of the proposed project. It will help the PMU in identifying the relevant Environmental and Social Standards (ESS), establishing an appropriate E&S risk rating for these subprojects and specifying the type of environmental and social assessment required, including specific instruments/plans. Use of this form will allow the PMU to form an initial view of the potential risks and impacts of the project. In order to determine if the required assessment is ESIA OR ESMP, the following should be considered

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

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

Questions	**Answer**		**ESS relevance**	**Due diligence / Actions**
	Yes	No		
Does the project involve civil works including new construction, expansion, upgrading or rehabilitation of healthcare facilities and/or waste management facilities?			ESS1	ESIA/ESMP, SEP
Does the subproject involve land acquisition and/or restrictions on land use?			ESS5	RP/ SEP
Does the project involve acquisition of assets for quarantine, isolation or medical treatment purposes?			ESS5	To be excluded /ineligible
Is the project associated with any external waste management facilities such as a sanitary landfill, incinerator, or wastewater treatment plant for healthcare waste disposal?			ESS1/ESS3	ESIA/ESMP, SEP
Is there a sound regulatory framework and institutional capacity in place for healthcare facility infection control and healthcare waste management?			ESS1	ESIA/ESMP, SEP
Does the project have an adequate system in place (capacity, processes and management) to address waste?			ESS1/ESS3	ICMWMP
Does the project involve recruitment of workers including direct, contracted, primary supply, and/or community workers?			ESS2	LMP, SEP

Does the project have appropriate OHS procedures in place, and an adequate supply of PPE (where necessary)?			ESS1/ESS2	ESIA/ESMP
Does the project have a GRM in place, to which all workers have access, designed to respond quickly and effectively?			ESS10	SEP
Does the project involve transboundary transportation (including Potentially infected specimens may be transported from healthcare facilities to testing laboratories, and transboundary) of specimen, samples, infectious and hazardous materials?			ESS1/ESS3	ESIA/ESMP, ICMWMP, SEP
Does the project involve use of security or military personnel during construction and/or operation of healthcare facilities and related activities?			ESS4/ESS1	ESIA/ESMP, SEP
Is the project located within or in the vicinity of any ecologically sensitive areas?			ESS6/ESS1	ESIA/ESMP, SEP
Is the project located within or in the vicinity of any known cultural heritage sites?			ESS8	ESIA/ESMP, SEP
Does the project area present considerable Gender-Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) risk?			ESS1	ESIA/ESMP, SEP

Annex III: ESMP Template

Introduction

The Borrower will need to develop an Environmental and Social Management Plan (ESMP), setting out how the environmental and social risks and impacts will be managed through the project lifecycle. This ESMP template includes several matrices identifying key risks and setting out suggested E&S mitigation measures. The Borrower can use the matrices to assist in identifying risks and possible mitigations.

The ESMP should also include other key elements relevant to delivery of the project, such as institutional arrangements, plans for capacity building and training plan, and background information. The Borrower may incorporate relevant sections of the ESMF into the ESMP, with necessary updates.

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

The issues and risks identified in the matrix are based on current COVID-19 responses and experience of other Bank financed healthcare sector projects. The Borrower should review and add to them during the environmental and social assessment of a subproject.

The WBG EHS Guidelines, WHO technical guidance documents and other GIIPs set out in detail many mitigation measures and good practices, and can be used by the Borrower to develop the ESMP. Proper stakeholder engagement should be conducted in determining the mitigation measures, including close involvement of medical and healthcare waste management professionals.

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

Table 4 - Environmental and Social Risks and Mitigation Measures during Planning and Designing Stage

Key Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget
Identify the type, location and scale of healthcare facilities (HCF)					
Identify the need for new construction, expansion, upgrading and/or rehabilitation					
Identify the needs for ancillary works and associated facilities, such as access roads, construction materials, supplies of water and power, sewage system					
Identify the needs for acquisition of land and assets (e.g. acquiring existing assets such as hostel, stadium to hold potential patients)					
Identify onsite and offsite waste management facilities, and waste transportation routes and service providers	Inadequate facilities and processes for treatment of waste	➢ Estimate potential waste streams ➢ Consider the capacity of existing facilities, and plan to increase capacity, if necessary, through construction, expansion etc. ➢ Specify that the design of the facility considers the collection,			

		segregation, transport and treatment of the anticipated volumes and types of healthcare wastes ➢ Require that receptacles for waste should be sized appropriately for the waste volumes generated, and color coded and labeled according to the types of waste to be deposited. Develop appropriate protocols for the collection of waste and transportation to storage/disposal areas in accordance with WHO guidance. Design training for staff in the segregation of wastes at the time of use			
Identify needs for transboundary movement of samples, specimen, reagent, and other hazardous materials					
Identify needs for workforce and type of project workers		➢ Identify numbers and types of workers ➢ Consider accommodation and measures to minimize cross infection ➢ Use the COVID-19 LMP template to identify possible mitigation measures			

Identify needs for using security personnel during construction and/or operation of HCF					
HCF design – general	- Structural safety risk; - Functional layout and engineering control for nosocomial infection				
HCF design - considerations for differentiated treatment for groups of higher sensitivity or vulnerable (the elderly, those with preexisting conditions, or the very young) and those with disabilities	Some groups may have difficulty accessing health facilities				
Design of facility should reflect specific treatment requirements, including triage, isolation or quarantine		➢ The design, set up and management of will take into account the advice provided by WHO guidance for Severe Acute Respiratory Infections Treatment Center. ➢ Hand washing facilities should be provided at the entrances to health care facilities in line with			

		WHO Recommendations to Member States to Improve Hygiene Practices. ➢ Isolation rooms should be provided and used at medical facilities for patients with possible or confirmed COVID-19. ➢ Isolation rooms should: ✓ be single rooms with attached bathrooms (or with a dedicated commode); ✓ ideally be under negative pressure (neutral pressure may be used, but positive pressure rooms should be avoided) ✓ be sited away from busy areas or close to vulnerable or high-risk patients, to minimize chances of infection spread; ✓ have dedicated equipment (for example blood pressure machine, peak flow meter and stethoscope ✓ have signs on doors to control entry to the room, with the door kept closed; have an ante-room for staff to put on and take off PPE and to wash/decontaminate before and after providing treatment.			

Design to consider mortuary arrangements	Insufficient capacity Spread of infection	➢ Include adequate mortuary arrangements in the design ➢ See WHO Infection Prevention and Control for the safe management of a dead body in the context of COVID-19)			

Annex IV: Project Procurement List

Procurement Plan for the next 12 months

	Name of activity	Estimated cost in US$	Procurement Category Goods/Work/ Consultant	Method of selection direct/limited/ national, or international competitive/shopping	Contract date	Who will procure	Comments
Covid -19 - G. no.1	supply and install of (1,000) Caravans in Dead Sea	3,656,000	Goods	Dirct	April 2nd, 2020	by Army	The Caravans is already supplied (JD2.6m) , install and used
Covid -19 - CS. no.1	Procurement officer	15,000	Individual consultant	IC	June 15th, 2020	Special Committee	
Covid -19 - CS. no.2	financial management officer	20,000	Individual consultant	IC	June 15th, 2020	Special Committee	
Covid -19 - CS. no.3	social safeguards officer	20,000	Individual consultant	IC	June 15th, 2020	Special Committee	
Covid -19 - CS. no.4	environmental safeguards officer	20,000	Individual consultant	IC	June 15th, 2020	Special Committee	

Covid -19 - CS. no.5	Selection of Technical Auditor	100,000	consultancy service	LCS	Jan. 2nd, 2021	Special Committee	
Covid -19- G. no.2 Lot no.1	Respiration A, Adult Ventilator	1,670,886	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19- G. no.2 Lot no.2	Respiration B, syringe pump	67,606	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19- G. no.2 Lot no.3	Respiration C, Advanced Bipap(ST)	31,646	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19- G. no.2 Lot no.4	Monitoring A, Central and Patient Monitor	616,034	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19- G. no.2 Lot no.5	Monitoring B, Emergency Trolley with defibrillator	190,141	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19- G. no.2 Lot no.6	Monitoring C, Color doplpler ultrasound scanner for miultipuropse	98,453	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19- G. no.2 Lot no.7	Monitoring D, Spot vital sign	25,316	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19- G. no.2 Lot no.8	General A,Medical Equipment for ICU Department Covide - 19 (4 items)	66,807	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19- G. no.2 Lot no.9	General B, Video laryngoscope pockt	14,065	Goods	RfQ	August 1st,2020	Special Committee	

Covid -19-G. no.2 Lot no.10	Hemodialysis A, CRRT	61,885	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19-G. no.2 Lot no.11	Hemodialysis B,Hemodialysis unit	28,129	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19-G. no.2 Lot no.12	Hemodialysis C,Portable R.O	14,065	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19-G. no.2 Lot no.13	Furniture A, ICU Bed, and stretcher	600,000	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19-G. no.2 Lot no.14	Furniture B, wheel chair and other items (5 itemes)	23,207	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19-G. no.2 Lot no.15	Furniture C, O2 reg british& suction reg british	45,288	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19-G. no.2 Lot no.16	Blood bank refrigerator	7,042	Goods	RfQ	August 1st,2020	Special Committee	
Covid -19-G. no.2 Lot no.17	Deep Vein thrombosis pump	14,085	Goods	RfQ	August 1st,2020	Special Committee	
	total amount	7,405,654					

Annex V: Resource List: COVID-19 Guidance

Given the COVID-19 situation is rapidly evolving, a version of this resource list will be regularly updated and made available on the World Bank COVID-19 operations intranet page (http://covidoperations/).

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 modified on July 2020 Safe management of wastes from health-care activities, issued in 2014

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

WORLD BANK GROUP GUIDANCE

- Interim Advice for IFC Clients on Preventing and Managing Health Risks of COVID-19 in the Workplace, issued on April 6, 2020
- Interim Advice for IFC Clients on Supporting Workers in the Context of COVID-19, issued on April 6, 2020
- IFC Tip Sheet for Company Leadership on Crisis Response: Facing the COVID-19 Pandemic, issued on April 6, 2020
- WBG EHS Guidelines for Healthcare Facilities, issued on April 30, 2007

ILO GUIDANCE

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

MFI GUIDANCE

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

CDC Group COVID-19 Guidance for Employers, issued on March 23, 2020

Annex VI: Infection Control and Waste Management Plan (ICWMP)

1. Introduction

1.1 Describe the project context and components

The Ministry of Health conducted an assessment to identify the gaps in capacities in detection and response to COVID-19, using the national capacities review tool of the World Health Organization in 2020. Based on this assessment, a support was provided by WHO to the MOH to develop its National Preparedness and Response Plan (NPRP) for COVID-19 aimed to strengthen the capacities of the Government of Jordan (GOJ) to prevent, detect and respond to the pandemic outbreak in accordance with International Health Regulation (IHR) technical areas. Accordingly, the World Bank is supporting the Ministry of Health of Jordan with a USD 20 million grant to implement a COVID-19 Emergency Response Project (P173972) following its National Preparedness and Response Plan for COVID 19.

The project aims to prevent, detect and respond to the threat posed by COVID-19 and strengthen the national health system for public health preparedness. It will support the MOH in its efforts to immediately respond to and mitigate the risks associated with the COVID-19 outbreak to protect all residents in Jordan, including registered refugees. It will also help develop Jordan's preparedness capacity to mitigate risks from comparable health and climate-related hazards. Based on the NPRP, the project aims to fill critical gaps in the following technical areas: country-level coordination planning and monitoring; risk communication and community engagement; surveillance, rapid response teams and case investigation; point of entry; national laboratories; infection prevention and control; case management; and operation support and logistics. These technical areas have been identified to immediately strengthen MOH capacity to address the current COVID-19 crisis in a timely manner, while working within the country existing systems and providing technical assistance as needed.

This project is prepared under the WBG's COVID-19 response global framework and financed by US$20 million under the Fast Track COVID-19 Facility (FTCF). Since Jordan is an IBRD eligible country, the FTCF is on IBRD financing terms. The project will only finance inputs aligned with WHO guidelines and standards for combating COVID-19. The project is working with two main components, which are:

Component 1: Emergency COVID-19 Response

The aim of this component is to prevent and limit to the spread of COVID-19 in Jordan. This will be achieved through providing critical support to enhance case detection, testing, case management, recording and reporting, as well as contact tracing, risk assessment and clinical care management. Specifically, this component will finance the procurement of medical and non-medical supplies, medicines, vaccines, equipment, consultancy services and implementation costs for capacity building as needed for COVID-19 preparedness and response activities consistent with the National Preparedness and Response Plan. Activities will include:

1) **Case Detection, Confirmation, Contact Tracing, Recording and Reporting. This will help in:**

i. Strengthen disease surveillance systems, public health laboratories and epidemiological capacity for early detection and confirmation of cases
ii. Combine detection of new cases with active contact tracing
iii. Support epidemiological investigation
iv. Strengthen risk assessment; and
v. Provide on-time data and information for guiding decision-making and response and mitigation activities. In relation to these activities, the Ministry of Health (MoH) has launched a new application called "Aman" (safety) which notifies those who have uploaded the application of the possibility of their infection with COVID-19 and traces the people they have mingled with.
vi. By mid- July, 650,000 users (6.5% of population) have installed the application on their smart phone.

2) **Enhance Overall Healthcare Services and Clinical Capacity to Respond to COVID-19**. This sub-component aims to strengthen health care system capacity to provide optimal medical care by maintaining essential healthcare services. The activities include
   iv. Supporting the strengthening of case management facilities (i.e. quarantine, isolation and clinical care facilities) by equipping facilities with necessary equipment and commodities
   v. Minor civil works and retrofitting of quarantine, isolation and treatment rooms in such facilities. To the extent feasible, equipment and facilities will be procured and retrofitted in line with state-of-the-art principles of energy efficiency; procurement of essential medical equipment and supplies, such as ventilators, oximeters, laryngoscopes, oxygen generators, PPE, disinfectants and other equipment and supplies for COVID-19 case management as well as medicines and vaccines (when they become available); and
   vi. Capacity building activities, such as training for health facilities staff on infection prevention, control, and clinical case management for COVID-19. Training health workers covering risk mitigation measures better prepares them for other health threats including climate related risks. Protective equipment and hygiene materials will protect staff against other climate related disease, in particular new emerging zoonoses. Strengthened clinical capacities will enhance adaptive capacity, improving the health system's ability to respond to other health threats including climate-related ones, improving the population's resilience also to climate-change threats.

3) **Risk communication and community engagement**. This sub-component will support the design and implementation of effective public health measures to prevent contagion and will support the development and implementation of associated communication and behavior change interventions for key prevention behaviors, such as hand-washing and social distancing, which besides helping contain the spread of COVID-19 helps against the spread of other climate-related conditions and water- or food-borne diseases. Targeting particularly vulnerable groups such as seniors and people with chronic health problems or co-morbid conditions with this health advice, and advice on climate-related risks, will increase population resilience. Community mobilization and participation in prevention and control measures through existing community institutions, especially engagement of communities in disease surveillance will greatly boost population awareness and consequently detection capacity of diseases but also other climate-related risks, enhancing climate resilience help understanding and therefore taking action on climate change.

4) **Multi-sectoral coordination and response**. The project will support activities to enhance multi-sectoral response and action, including inter alia: the operations of command rooms at the central and regional levels; implementation of risk communications and community engagement campaigns; implementation of containment strategies, including point of entry interventions and operation of rapid response teams.

Component 2: Implementation Management and Monitoring and Evaluation

The second component will finance human resources and running costs for the International Coordination and Project Management Unit (ICPMU) at the MOH, including

vi. Staffing
vii. Data collection, aggregation and periodic reporting on the project's implementation progress
viii. Monitoring of the project's key performance indicators and periodic evaluation
ix. Overall project operating costs and financial and technical audit costs; and
x. Monitoring and compliance with Environmental and Social Commitment Plan (ESCP).

Data collection and monitoring will be done in a sex and age-disaggregated manner to contribute to a better understanding of the epidemiological profile of the affected population. For speedy and effective project management upon effectiveness of the project, additional staff (individual consultants for fiduciary, environmental, and social safeguards) will be hired for the ICPMU.

Component 3: Contingent Emergency Response Component (CERC)

In the event of an eligible crisis or emergency, the project will contribute to providing immediate and effective response to said crisis or emergency. This component would draw from uncommitted funds under the project from other components to cover the emergency response. To facilitate a rapid response, in case the CERC is activated, the restructuring of the project is deferred to within three months after the CERC is activated.

1.2 Describe the targeted healthcare facility (HCF):

The targeted health facilities are part of the Ministry of Heath hospitals, and they are considered general public hospitals. The following illustrates the targeted healthcare facility (HCF) for this project

1. An independent building in Al-Basheer hospital that contains the new Intensive Care Department, ICU and is equipped with 66 beds. Number of isolation beds are 150
2. Field hospitals in the central part of Jordan, next to Prince Hamzah hospital and accommodate 400 beds, of which 80 are dedicated for the ICU.
3. Field hospital in the northern part of Jordan, next to King Abdulla University Hospital and accommodate 300 beds, of which 48 are dedicated for the ICU.
4. Field hospital in the southern part of Jordan, next to Ma'an Hospital and accommodate 250 beds, of which 48 are dedicated for the ICU.

The selected healthcare facilities mentioned above are connected with clean water supplied by the municipalities of the governorates of concern, and they are connected to county sanitation supply

service. In addition, they are connected to the National grid provided by Jordan Power and Electricity Company.

1.3 Describe the design requirements of the Health Care Facilities (HCF)

1.3.1 Laboratory Facilities

It is essential to ensure that medical health laboratories adhere to appropriate biosafety practices. Any testing for the presence of the virus responsible for COVID-19 or of clinical specimens from patients meeting the suspected case definition should be performed in appropriately equipped laboratories, by staff trained in the relevant technical and safety procedures. National guidelines on laboratory biosafety should be followed in all circumstances[28]. The following shall be the minimum requirements for the beneficial laboratories under the Project WHO Laboratory Biosafety Manual and WHO interim guidance for laboratory biosafety related to 2019 COVID:

1. Sufficient space and a designated hand-washing basin must be provided, with appropriate restriction of access
2. Doors must be properly labelled, and laboratory walls, floors, and furniture must be smooth, easy to clean, impermeable to liquids and resistant to the chemicals and disinfectants normally used in the laboratory
3. Laboratory ventilation, where provided (including heating/cooling systems and especially fans/local cooling split-system air-conditioning units – specifically when retrofitted) should ensure airflows do not compromise safe working. Consideration must be made for resultant airflow speeds and directions, and turbulent airflows should be avoided; this applies also to natural ventilation
4. Laboratory space and facilities must be adequate and appropriate for safe handling and storage of infectious and other hazardous materials, such as chemicals and solvents
5. Facilities for eating and drinking must be provided outside the laboratory, and first-aid-facilities must be accessible
6. Appropriate methods for decontamination of waste, for example disinfectants and autoclaves, must be available and close to the laboratory
7. The management of waste must be considered in the laboratory design. Safety systems must cover fire, electrical emergencies, and emergency/incident response facilities, based on risk assessment
8. There must be a reliable and adequate electricity supply and lighting to permit safe exit
9. Laboratory furniture must be capable of supporting anticipated loads and uses. Open spaces between benches, cabinets, and equipment should be accessible for cleaning
    - Bench tops must be impervious to water and resistant to heat, organic solvents, acids, alkalis, and other chemicals.
    - Chairs used in laboratory work must be covered with a non-porous material that can be easily cleaned and decontaminated with appropriate disinfectant.
10. Sufficient space must be provided for the safe conduct of laboratory work and for cleaning and maintenance,

[28] Laboratory biosafety manual, 3rd ed. Geneva: World Health Organization; 2004 (https://www.who.int/csr/resources/publications/biosafety/Biosafety7.pdf?ua=1 , accessed 14 February 2020).

11. Safety systems should cover fire, electrical faults, emergency shower and eyewash facilities with First-aid areas or rooms suitably equipped and readily accessible should be made available.
12. In-depth design requirement for the laboratories is elaborated in WHO Laboratory Biosafety Manual and WHO interim guidance for laboratory biosafety related to 2019 COVID[29].

1.3.2 Quarantine / Isolation Rooms

Since it is difficult to meet ideal standards for the isolation rooms due to the financial and physical factors, the design adhered to as closely as possible to the WHO Interim Infection Prevention and Control recommendations for Coronavirus Disease 2019 (COVID-19) in Health Care Settings. Therefore, the following requirements should be achieved

1. Furnishing and fittings including the followings
   - Clinical hand wash basin with non-touch, fixed temperature mixer tap
   - Wall-mounted soap dispensers
   - Disinfectant hand rub dispensers
   - Disposable towel holders
   - Glove dispensers
   - Storage for clean personal protective equipment
   - Clean waste bins
   - Observation window in corridor wall with integral privacy blinds
2. Adequate ventilation either natural or mechanical.
3. The door is kept closed at all times
4. Hand washing station with running water and soap and alcohol-based hand rub. These should be placed near the point of care, at the entrance and exit of the isolation room.
5. Preferably should have toilet and bathroom so the patient does not leave the room. In case the room does not have one, a dedicated toilet and bathroom should be identified.
6. Patient bedside locker or table for placing items
7. Easy to clean surfaces (no carpets, preferably no curtains)
8. Space for provision of PPE at the entrance to the room for HCWs
9. A designated team of HCWs, to care for known or suspected COVID-19 patients. These HCWs care only for these patients during their shift.
10. Keep a roster of all staff working in the isolation areas including visitors, for possible outbreak investigation and contact tracing.
11. Investigate the use of a pressure stabilizer above the room door
12. Provision of two-way intercommunication system between the patient's room and the nurses' station.

1.3.3 Design, size and location of an incinerator

Proper design and operation of incinerators should achieve desired temperatures, waste residence times inside the furnace, and other conditions necessary to destroy pathogens, minimize emissions, avoid clinker formation and slagging of the ash (in the primary chamber), avoid refractory damage

[29] https://www.who.int/publications/i/item/9241546506

destruction, and minimize fuel consumption. Good combustion practice (GCP) elements also should be followed to control dioxin and furan emissions. Technology to be selected will be based on available supporting infrastructure and resources (reliable sources of power, fuel, etc.), total amount of medical waste generated by the HCF, and would consider the need for temporal storage due to the peak waste generated due to COVID-19 in comparison to average monthly medical waste generated.

Additional Specification include the incinerators should incorporate air control parts to mitigate air pollution and have an additional specifications for hot water system to generate hot water as part of resource use efficiency. The incinerator should be housed in a controlled shed free of rodents, adequate ventilation with sanitary facilities including toilet, cloakroom and wash area, and the incinerator facility should have appropriate fire suppression equipment including fire extinguishers, sand bucket and fire blanket, and equipped First Aid Kit and health and safety manual.

1.3.4 Biosafety Levels

Jordan Ministry of Health, EMPHNET Launch National Bio-risk Management Guidelines[30], which serve as a framework for biosafety and biosecurity measures that, can be implemented in laboratories throughout Jordan. The guidelines will reduce the risks of health hazards associated with laboratory work in all concerned sectors of society including human and animal health, agriculture, scientific research, and the biochemical industry as a whole. The guidelines consist of requirements for a proper bio-risk management system. These include requirements related to policies, risk assessment and control, waste management, personal protective equipment, and other requirements that apply to contractors, visitors, and suppliers. The guidelines also provide sections for emergency response, corrective action, and accident investigation.

2. Infection Control and Waste Management

Healthcare/ Medical waste is defined as "all waste generated by health-care establishments (human or veterinary), including research facilities and laboratories. It can include waste generated in the course of healthcare in homes. Hazardous healthcare waste is of primary concern, due to its potential to cause infections, disease or injury. Precise definitions of types of healthcare waste (HCW) must consider the associated hazards and should be incorporated into Jordan Infection Control and Healthcare Waste Management (HCWM) legal, regulatory, technical, and information documents. On the other hand, Infection prevention and control (IPC) is defined as the discipline concerned with preventing of the spread of infections within the health-care setting and at community level. IPC are evidence-based practices and procedures that are applied consistently in health care settings to prevent or reduce the risk of transmission of microorganisms to health care providers, clients, residents and visitors. Therefore, at either health care or community setting, IPC is concerned with interventions relating to health and environment, which can be divided into 4 parts; Personal (staff) protection; Patient protection; Population (Community) Protection and Environment protection.

[30] http://emphnet.net/wp-content/uploads/2016/08/Jordan-Biorisk-Management-Guideline.pdf

According to the WHO, about 15-25% of total health-care waste should be infectious waste, and improper handling of health care waste can cause serious health problems for workers, community and environment. WHO reports showed that worldwide, about 5.2 million people (including 4 million children) die each year from waste related diseases. The hazards of exposure to health care waste can range from gastro-enteric, respiratory, and skin infections to more deadly diseases such as HIV/AIDS, and Hepatitis (Babanyara et. al 2013). WHO reported that globally, injections with contaminated syringes caused 21 million hepatitis B infections (32% of all new infections), 2 million hepatitis C infections (40% of all new infections) and 260,000 HIV infections (5% of all new infections). More specifically medical waste has a high potential of carrying microorganisms that can infect people who are exposed to it, as well as the community at large if it is not properly disposed of. Many of these infections were avoidable if the wastes had been disposed of safely (WHO 2004)[31].

The beneficiary health-care activities in the laboratory, quarantine, isolation and treatment centers will protect and restore health and save lives however, the amount of infectious waste and by-products being generated may cause adverse potential health and environmental impacts. The average distribution on types of medical waste for purposes of waste management planning is approximately 80% non-infectious and 20% infectious such as biological/pathological waste, chemical/pharmaceutical waste and sharp materials. The quantity of infectious wastes generated will increase due to infectious nature of COVID 19. According to WHO guidelines, all the waste generated in and around the care of COVID-19 patients is treated as infectious waste.

Hazardous HCW Generation in Jordan

Theoretically MW generation is estimated based on a rate of 0.6 kg/day to be 9 ton/day, 245 ton/month or 2,934 ton/year noting that it does not include all generation from outpatient clinics and dental facilities, nor does it include generation from emergency medical facilities being established in refugee camps by international donors. However in view of the lack of good segregation in many HCEs in Jordan (around of 75% of healthcare facilities practicing good segregation) , the generation rate may be far higher than the above mentioned value This means that there is a need for establishing a national monitoring program and strengthening the inspection system and intensive training and staff behavior monitoring at work place are urgently needed so that the above mentioned WHO goal would be reached and that the treatment would be restricted only to the hazardous component of the waste generated by healthcare facilities and would generate many savings particularly in the process of treatment. Tables 4 and 5 below summarizes the current profile of medical facilities summarized above in greater detail (Source: MOH).

Table 4: Geographic Distribution of Hospitals and (Theoretical) Medical Waste Generation

Variables	Location			
	North	Central	South	Total
No of Hospitals	28	78	12	**118**
No of Beds	3,205	10325	1170	**14700**
Theoretical Daily MW Generation (Tons)	1923	6,200	0,7	**8825**
Theoretical Monthly MW Generation (Ton	58,0	186,000	21	**265**

[31] https://www.who.int/water_sanitation_health/medicalwaste/en/hcwmpolicye.pdf

Theoretical Annual MW Generation	696	2232	252	**3180**

All hospitals have active medical waste management capacity and access to final treatment and disposal facilities either on-site or at commercial treatment facilities. Initially most public (MOH) and all Royal Medical Services hospitals were equipped with small basic and old incinerators for on-site treatment and disposal of HCW has been in place (on-site) for some time. However as in most countries the incineration technology used is recognized as being of low quality in terms of currently environmental performance standards, socially for air emissions as the incinerators didn't have air emission control measures. Additionally, the ability to maintain and operate these facilities reliably is an issue, is resistance to their operation in hospitals themselves and in urban areas. While no systematic emission testing has been undertaken, it is known that medical waste incineration as a significant source of PCCD/F emissions which can impose health and environment adverse effect.

MOH have recognized the limitations and constrains of the conventional and old, previously manufactured incineration technology and have initiated a strategy of replacing the small on-site incinerators with non-incineration alternatives environmentally friendly techniques, such as autoclave units equipped with shredders. Conversion to on-site non-incinerator treatment technology is completed in private sector hospitals, a portion of this waste generated from private hospitals is contracted to commercial treatment unit either by autoclaving or incinerators.

The MOH invested in providing (9) public hospital with autoclaves with shredders and steam sterilization and steps of addition of another (10) units financed through the project of " Reduction and elimination of POPs and other chemical releases through implementation of environmentally sound management of E-Waste, healthcare waste and priority U-POPs release sources associated with general waste management activities" GEF and organized by UNDP to achieve environmentally sound healthcare waste management (HCW), which has the objective to improve the current HCW practices, including training, certification and procurement of HCW waste treatment technology. Similarly, (2) units are installed in the military (RMS) hospital system from the same project.

Table 5: details on the number of Incinerators in all regions of Jordan

Sector	**No. of Incinerators (All region)**
Public/ Ministry of Health	• Incinerator installed at the Badia Hospital at northern region • Incinerator at Prince Salma hospital (central region) • Incinerator at Al-husein hospital (central Reion)

No of HCW with Non-Incineration Units (Shredding and steam sterilization or microwaving		
North	**Central**	**South**
5 units located at • Princess Basma hospital/ Irbid • Mafraq Hospital/ Mafraq • Ramtha Hospital • Ruwished hospital/ Mafraq	9 units located at • Basheir Hospital (2 units)/ Amman (provide services to other MOH hospitals) • Tutanji Hospital/ Amman (pops project)	5 units located at • Karak hospital/ Karak (PoPs project) • Gour Safi Hospital/ Karak (Pops project)

• Jarash Hospital/ Jarash (pops project)	• New Salt Hospital/ Balqa (pops project) • Prince Hussein Hospital/ Balqa (pops project) • Princess Iman Hospital/ Balqa (pops Project) • Zarqa Hospital / Zarqa (pops project) • Prince Fisal Hospital/ Zarqa • Nadeim Hospital/ Madaba • Two Central laboratories units in Amman (MOH) /	• Queen Rania Al-Abdallah Hospital/ Wadi Musa (Pops project) • Maan Hospital/ Maan • Jarash Hospital/ Jarash (pops project)
Sector	**No. of Incinerators (All region)**	
Military/ Royal Medical Services	All are out of service	
North	**Central**	**South**
Four units located at • Prince Rashid Hospital/ Irbid (2 units) (one from Pops Project • King Talal Hospital /Mafraq • Princess Haya medical facility at Ajloun	Six units located at • Al-Hussein medical city (3 units) in Amman • Queen Alia (2 units) (one from Pops Project) • Prince Hashem/ Zarqa	Three units located at • Prince Ali hospital/ Karak • Prince Zaid hospital/ Tafila • Prince Hashem Hspital/ Aqaba
Sector	**No. of Incinerators (All region)**	
Private Sector	All are out of service	
North	**Central**	**South**
Three units located at • Ibn Al Nafees Hospital/ Irbid • Islamic specialty Hospital/ Irbid • King Abdulla Hospital (university hospital)	11 units located at • Islamic Hospital (Microwaving)/ Amman • Alkhaldi hospital (2 units)/Amman • Isra Hospital/ Amman • Alurdon Hospital (2 units)/ Amman • Alhayat Hospital/Amman • Ahusein Center for Cancer/Amman • Marka hospital/Amman • Alrazi Hospital/Zarqa • Almahaba hospital/Madaba	N/A
Sector	**No. of Incinerators (All region)**	
Jordan University/Amman	Equipped with on-site non- incineration (shredding and steam sterilization) unit for its MW	
JUST /Irbid	**3 incinerator:** Provides HCW transporting and treatment services to King Abdulla Hospital (university hospital), and MOH hospitals in the Northern Region according to agreement since 2009 ; as well signed between JUST and MOH) , and for the private sector (Central Region and Northern Region)	

Commercial treatment facilities	1- Anwar Aldahya facility in Irbid (Northam region) treat Medical waste by Non-Incineration Unit (Shredding and steam sterilization) **2-** Clean city in Amman (Central region) Treat hazardous waste including HCW by incinerator and incinerate cytotoxic waste generated from MOH hospital in a commercial basis according to agreement signed between both parties. **3-** Green life facility in Amman (central region) treat medical waste by Non-Incineration Unit (Shredding and steam sterilization)
MOH installed one Non-Incineration Unit by steam sterilization in a ward in AlBasheir Hospital was intended to admit patients infected with Ebola in response to Ebola outbreak preparedness and management plan in 2014 , the unit didn't being used up to date and the ward became a police station for mentioned hospital, the unit should be reinstalled in another location	
Ministry of Health has 8 cars for transporting medical waste to treatment and final disposal	

2.1 Overview of infection control and waste management in the HCF

The WHO guidelines on Safe management of wastes from Health-care activities[32] (2014) and the National Health Care Waste Management Plan (2016-2021) categorizes healthcare waste into two groups as hazardous and non-hazardous wastes. The hazardous waste is also classified into six classes of solid waste and one liquid waste (effluent) and as follows

1. **Infectious waste (clinical waste)**: Infectious waste is material suspected to contain pathogens (bacteria, viruses, parasites or fungi) in sufficient concentration or quantity to cause disease in susceptible hosts. This category includes:
   - Waste contaminated with blood or other body fluids
   - Cultures and stocks of infectious agents from laboratory work
   - Waste from infected patients in isolation areas, surgery and autopsies (e.g. excreta, tissue, and dressing from infected or surgical wounds, clothes soiled with human blood or other body fluid).
2. **Sharps**: it is all objects and materials that pose a potential risk of injury and infection due to their puncture or cutting properties (e.g., syringes with needles, blades, broken glass). For this reason, sharps are considered one of the most hazardous categories of waste generated during medical activities.
   - **Pathological and anatomical wastes:** it could be considered a sub-category of infectious waste, but is often classified separately – especially when special methods of handling, treatment and disposal are used. Pathological waste consists of tissues, organs, body parts, blood, body fluids and other waste from surgery and autopsies on patients with infectious diseases.
3. **Pharmaceutical and cytotoxic waste**: it includes; expired, unused, spilt and contaminated pharmaceutical products, such drugs, vaccines and sera (serum) that are no longer required.

[32] https://www.who.int/water_sanitation_health/publications/wastemanag/en/

The category also includes discarded items used in the handling of pharmaceuticals, such as bottles or boxes with residues and drug vials. Cytotoxic waste is considered a sub-group of hazardous pharmaceutical waste, due to its high degree of toxicity.

4. **Highly infectious waste**: it includes all viable biological and pathological agents artificially cultivated in significant elevated numbers. Cultures and stocks, dishes and devices used to transfer, inoculate and mix cultures of infectious agents belong to this category of waste.
5. **Radioactive Waste**: it includes liquids, gas and solids contaminated with radionuclides whose ionizing radiations have genotoxic effects. These are found in the waste products from patients who are undergoing radiation treatment.
6. **Special hazardous waste (waste with high contents of heavy metals)**: it refers to chemical wastes that can pose health problems when they are exposed to people by accidental inhalation, skin contact and/or ingestion. This includes gaseous, liquid and solid chemicals, waste with a high content of heavy metals such as batteries, pressurized containers, broken thermometers, blood pressure gauges, photographic fixing and developing solutions in X-ray departments, and halogenated or non-halogenated solvents.
7. **Liquid Waste Effluents** are a non-chemical liquid wastes that comes out of laundry, kitchen, toilet, shower and laboratory rooms, which may be contaminated by pathogenic micro-organisms. Effluents from isolation wards, treatment centers and medical diagnostic laboratories should be considered as hazardous liquid waste that should receive specific treatment (thermal, chemical and irradiation) before being discharged into the sewer/drainage system, if such a system exists. During operation of the laboratory activities, all wastes generated in the laboratories of the facility (including sample packaging materials, culture materials, petri dishes, PPE, and associated process wastes) would leave the laboratories only after decontamination using the facility's autoclave, after being chemically sterilized or released effluent from the labs and isolation area directed to a pretreatment chamber before release to public sewers.

Jordan's Medical Waste for COVID- 19

The Department of Transport (DOT) at the USA considered the medical waste generated from COVID-19 in "**Category B**", which refer to an infectious substance that is not in a form generally capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure to it occurs. The Centre for Disease Control and Prevention (CDC) and the World Health Organization (WHO) consider the medical waste related to COVID-19 at HCF as regulated medical waste and recommend that the management of waste materials related to COVID-19 from healthcare facilities should be performed in accordance with routine handling procedures for medical waste (for example: lab specimens, sharps, cleaning cloths, wipes, single-use microfiber cloths, etc.). Medical Waste Treatment Methods Approved methods for treatment of medical waste related to COVID -19 include steam sterilization (autoclave), incineration, chemical treatments, and shredding After treatment, treated medical waste may be managed as routine municipal solid waste and disposed of in a municipal solid waste landfill

Managing COVID-19 Wastes from Residences and Businesses Follow CDC's recommendations for cleaning and disinfecting surfaces. If possible, dedicate a lined trash can for any ill person. Residential place all used gloves, facemasks, and other disposable items in a bag that can be tied

closed before placed in another bag with other domestic wastes. Place this bag in a rigid trash container, like a trash can with a lid or dumpster. Wash hands with soap and water for at least 20 seconds or use an alcohol-based hand sanitizer immediately after removing gloves or handling trash bags. Recommendation from department of labour (USA)/OSHA (Occupational safety and health administration) about waste and wastewater related to COVID-19 as follows"

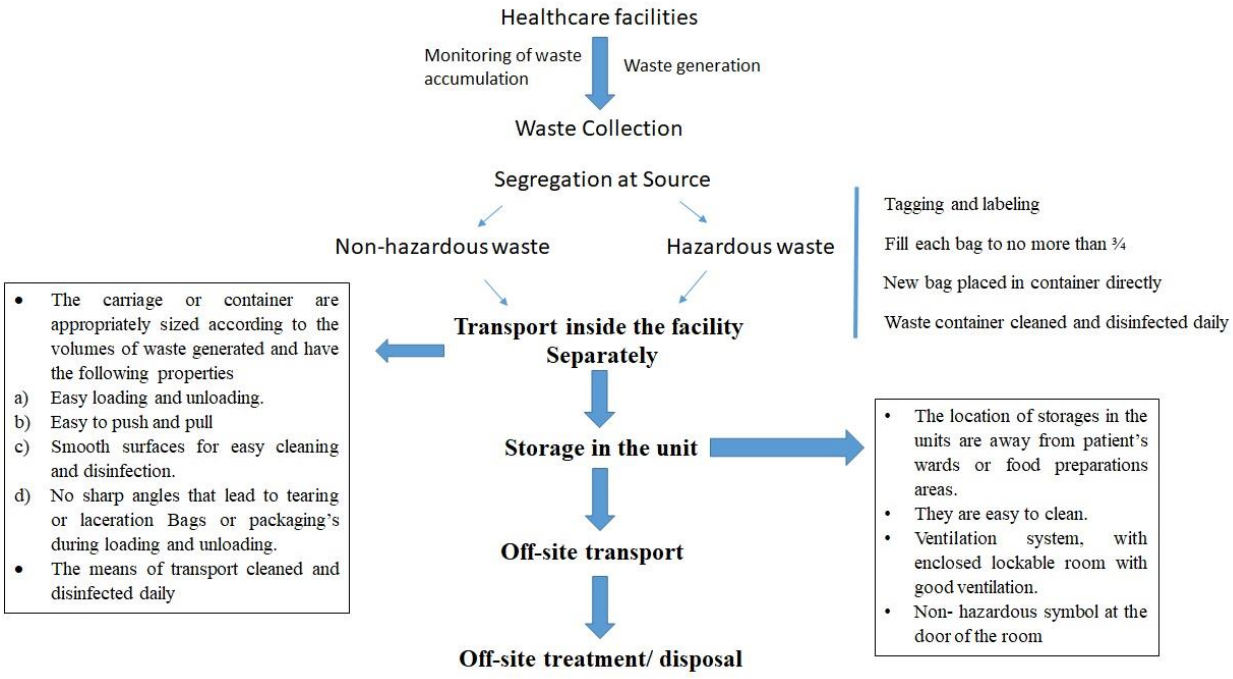
1. **Municipal Waste**:
    - Workers and employers should manage municipal (e.g., household, business) solid waste with potential or known SARS-CoV-2 contamination like any other non-contaminated municipal waste.
    - Use typical engineering and administrative controls, safe work practices, and PPE, such as puncture-resistant gloves and face and eye protection, to prevent worker exposure to the waste streams (or types of wastes), including any contaminants in the materials, they manage. Such measures can help protect workers from sharps and other items that can cause injuries or exposures to infectious materials.
2. **Medical Waste**
    - For medical waste with potential or known COVID-19 contamination, manage like any other regulated medical waste. COVID-19 is not a “Category A” infectious substance.
    - Use typical engineering and administrative controls, safe work practices, and PPE, such as puncture-resistant gloves and face and eye protection, to prevent worker exposure to the waste streams (or types of wastes), including any contaminants in the materials, they manage. Such measures can help protect workers from sharps and other items that can cause injuries or exposures to infectious materials.
3. **Recycling**
    - As with municipal waste, employers and workers in the recycling industry should continue to use typical engineering and administrative controls, safe work practices, and PPE, such as puncture-resistant gloves and face and eye protection, to prevent worker exposure to recyclable materials they manage, including any contaminants in the materials.
4. **Wastewater**
    - Coronaviruses are susceptible to the same disinfection conditions in the healthcare setting as other viruses, so current disinfection conditions in wastewater treatment facilities are expected to be sufficient. This includes conditions for practices such as oxidation with hypochlorite (i.e., chlorine bleach) and per-acetic acid, as well as inactivation through the use of ultraviolet irradiation.
    - There is no evidence to suggest that additional, COVID-19-specific protections are needed for employees involved in wastewater management operations, including those at wastewater treatment facilities. Wastewater treatment plant operations should ensure workers follow routine practices to 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.

Generally, a total of 132,760Kg of medical wastes were produced from Al Basheer hospital over the period of January to June 2020. In addition, the quantities of medical waste that have been treated in the sterilization devices (cutting and sterilizing with moist heat) at Al-Basheer Hospital reached 220,055Kg between January to June from eight major sources and according to table 1 below

Table 1: sources of medical waste between January and June, 2020 in Kg (**** indicates no collection)

Sources of medical waste	Jan	Feb	Mar	Apr	May	Jun
Blood laboratory	3480	3510	4200	4400	5750	9085
Prince Hamzah hospital	14500	15400	2000	****	5300	****
Health centers	2800	2950	2950	3050	5320	10000
Tutanji Hospital	5300	5600	5600	5710	sterilization device installed	
Karak	4800	4900	5100	5200	1500	5200 and a sterilization device installed
Ghor Safi	1800	1950	1900	1950	****	1950 and a sterilization device installed
Zarqa (new)	12500	12800	13200	13500	11350	12910 and a sterilization device installed
Prince Hasan	2200	2400	2500	3600	sterilization device installed	

The following flow chart represents the waste streams in the HCF



Sorting, labeling and packaging of wastes

- The process of sorting and placing the waste in its appropriate packaging within the unit is the responsibility of the generator (medical and non-medical staff).
- The sorting and packing process must be done at the nearest point of waste generation.
- The sorting and packing process must be done in bags or packaging's according to the color code and labeled in accordance to the hazard properties of the waste as outlined in the table below (6).

Table (6): color coded for sorting HCW

Class	Type of waste	Color code	Type of packaging
1	Highly infectious waste	Red	Leak-proof strong plastic bag placed in a container
2	Infectious wastes	Yellow	Leak-proof strong plastic bag placed in a container
3	Sharp Waste	Yellow	puncture proved container
4	Pathological waste	Yellow	Leak-proof strong plastic bag placed in a container
5	Chemical waste	brown	Rigid container or box or bottle depending on the hazardous property.
6	Pharmaceutical waste	brown	Plastic bag, cardboard box or rigid container depending on the hazardous property.
7	Chemotherapy Waste (Cytotoxic, genotoxic waste)	Blue	Leak-proof strong plastic bag placed in a container
8	Radioactive waste	According Radiation Work Regulatory Authority	
9	Non-hazardous waste/municipal caste	Black	Plastic bag inside a container / bin.

According to the Infection Prevention and Control Manual at Health Care Institutions published by the Ministry of Health of Jordan through the efforts of the Department of Infection Control/ Communicable Diseases Directorate and in cooperation with World Health Organization. Functions and Responsibilities of the Head of the Central Sterilization Unit:

1. Formulation and follow-up of the application of policies and procedures in sterilization units in the health facility, including but not limited to:
    - Transportation P&P for contaminated and sterile products.
    - Manual cleaning policies and procedures
    - Mechanical cleaning policies and procedures
    - Packaging policies and procedures.
    - Sterilization policies and procedures

- Quality control policies and procedures.
- Storage policies and procedures ... etc.

2. Full knowledge of
   - Names of various medical and surgical procedure
   - Names and types of surgical instruments.
   - Types of apparatus used in sterilization - inside and outside the health facility.
   - Types, concentrations and method of dealing with different chemical disinfectants.
   - Types of procedures and methods used in packaging.
   - Types of materials used in packaging.
   - Quality control procedures and ensure the effectiveness of sterilization.
   - The foundations of public safety, occupational health and dealing with occupational hazards.
   - Emergency, the correct evacuation method, and its role in it.
   - Document all of the above.
3. Administrative tasks and responsibilities
   - Direct supervision of the work within the unit.
   - Provide all necessary supplies and consumables.
   - Provide the means of personal protection for the staff of the unit and ensure compliance.
   - Develop the assignments and distribute the work to the working staff according to the areas in the unit.
   - Follow-up of the Unit's staff commitment to infection prevention policies and procedures.
   - Continuing education and training for cadres and students from different bodies.
   - Check the quality of sterilization with indicators and document this in special records.
   - Continuous documentation of all activities, functions and responsibilities of the central sterilization unit.
   - Immediate notification to the immediate head of any problems, obstructions or malfunctions that occur in an emergency and affect the course of work.
   - Follow-up maintenance matters with medical engineering of various devices and others.
   - Follow-up of housekeeping, cleaning and disinfection policy for the unit as recommended.
   - Ensure sufficient stock of materials and supplies used in the central sterilization unit and not exceed the validity period.
   - Provide adequate stock of sterilized materials and supplies sufficient to cover the needs of all sections of the health facility.

In addition, the functions and responsibilities of the unit's employees is represented by

1. Full knowledge of:
   - Names of medical and surgical procedures performed at the hospital.
   - Names of surgical instruments used in hospital.
   - Types of sterilization devices - inside the hospital and its mechanism of operation.
   - Types of procedures and methods used in packaging.
   - Types, concentrations and treatment of chemical disinfectants used in the unit.
   - Types of materials used in packaging.

- Quality control procedures and maintenance in the central plant.
- The foundations of public safety, occupational health and dealing with occupational hazards.
- Emergency, the correct evacuation method, and its role in it.
- Immediate notification to the immediate head of any problems or obstacles that occur in an emergency manner.

2. Tasks and responsibilities:
    - Daily inspection of sterilization devices of all kinds and ensuring their efficiency, validity, cleanliness and readiness.
    - Check the quality indicators used in the treatment of the tools and according to the policies adopted by the health institution.
    - Build positive professional relationships with all customers with central sterilization unit.
    - Receive non-sterile tools from all parts of the hospital.
    - Continuous inspection of surgical instruments and devices to be sterilized in a scientific manner to prevent their corruption and disruption.
    - Conducting the cleaning process in a correct scientific manner prevents the rusting of the tools and thus damage them and remove them from service
    - Use lubricants suitable for the tools that need to be.
    - Collection and packaging of all surgical instruments after cleaning them in a scientific manner and using appropriate packaging materials according to lists prepared in cooperation with different sections.
    - Determination of validity period for sterilization according to the materials used in packaging.
    - Conduct sterilization using appropriate sterilization types for each type of sterilizer.
    - Follow the sterilization cycle to ensure that the stages of the equipment are followed according to the manufacturer's instructions.
    - Proper storage of sterile tools and devices in a safe and sound manner according to the recommended storage conditions.
    - Maintain an appropriate storage level consistent with hospital need and maintain shelf life.
    - Delivery of sterilized items and materials to the hospital sections in a safe manner using special closed trolley that prevent re-contamination.

Finally, functions and responsibilities of service workers in the unit are represented by

- Provide various cleaning materials as recommended by the head of the unit
- Cleaning and disinfection daily according to the cleaning policy in the unit and according to the areas.
- Never use the sterilization equipment.
- Full compliance with the policies of the Unit.
- Delivery of towels and sheets to the dyeing unit.
- Solve the cleaning materials according to the required concentration and under the supervision of the unit.
- Clean and disinfect different surfaces twice a day when needed.
- Weekly cleaning of high surfaces such as door corners and high lines

Details of the Infection Prevention and Control Manual is available at the Ministry of Health

3. Management Measures

The best practice is to ensure that all health facilities (blood service centers, laboratories, isolation, quarantine, treatment centers) should minimize their waste generation to the barest possible minimum amounts. Appropriate plans, strategies and actions should be established to ensure adequate medical waste minimization at source by implementing the following waste minimization strategies:

1. Source reduction. Purchasing and supplying materials, which are less wasteful and/or generate less medical waste.
2. Stock management. Frequent auditing, use of the oldest stock first and checking the expiry date of products during receiving and issuing of commodities.
3. Encouraging the use of recyclable products. Using materials that can be reused both off-site and on-site.
4. Centralized purchasing, supply of medical goods to ensure the selection of less wasteful materials
5. Source suppliers who may deliver chemicals and pharmaceuticals in small quantities, this will encourage the hospital administration to make purchase in small manageable quantities
6. Ensure good management and control practices especially in the purchase and use of pharmaceuticals
7. Enforcing a rigorous and careful segregation of the infectious waste at source.
8. Segregation of waste at the point of generation. Sorting the waste into different categories helps to minimize the quantities of infectious waste generated.
9. Reduction of unnecessary injections to reduce on sharps waste
10. Training of relevant staff on waste minimization and benefits especially the medical staff to make changes towards less wasteful clinical practices.

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8	Radioactive waste	According Radiation Work Regulatory Authority	
9	Non-hazardous waste/municipal caste	Black	Plastic bag inside a container / bin.

Generally, a storage place is available in all health care facilities of hospitals in Jordan including Al-Basheer. This is a mandatory action according to the medical waste instruction no. (1) for the year 2001. In Al-Basheer hospital, the following has to be highlighted regarding storage and segregation of wastes

1. **The Collection and transport of medical waste**
   - A proper monitoring of waste accumulation in the bags and containers is practiced in generation areas
   - The collection time is consistent and fixed, based on the quantity of waste produced in each area of the hospital.
   - General non-hazardous waste collected separately from hazardous waste.
   - Waste bags and sharp container filled to no more than ¾.
   - It is not allowed to collect and transport waste bags and containers from generation area before tagging and labeling them, with the name of unit or section where the waste generated , date and time , type of waste
   - New bag placed in container directly filled after the collection.
   - The waste container cleaned and disinfected daily or directly in case of leakage or spillage.
2. **Transport inside the facility (internal transport)**
   - Onsite transport place during less busy times whenever possible.
   - Regular transport routes and collection times are fixed and reliable.
   - The waste transported from one place to another within the unit by plastic containers, with wheels and lid (cover) dedicated to this purpose.
   - Hazardous and non-hazardous waste transported separately. In general, there are three different transport systems, which are:
     a) Waste transportation trolleys for general waste painted black, only used for non-hazardous waste types. Infectious waste transported together with used sharps waste. Infectious waste not transported together with other hazardous waste, to prevent the possible spread of infectious agents.
     b) Trolleys colored yellow, lidded and labelled with a “biohazard” sign.

c) Other hazardous waste, such as chemical and pharmaceutical wastes, transported separately in boxes to central storage sites on demand.

- The carriage or container are appropriately sized according to the volumes of waste generated and have the following properties
  a) Easy loading and unloading.
  b) Easy to push and pull
  c) Smooth surfaces for easy cleaning and disinfection.
  d) No sharp angles that lead to tearing or laceration Bags or packaging's during loading and unloading.
- The means of transport cleaned and disinfected daily

3. **Storage in the unit**
   - The location of storages in the units are away from patient's wards or food preparations areas.
   - They are easy to clean.
   - Ventilation system, with enclosed lockable room with good ventilation.
   - Non- hazardous symbol at the door of the room.
4. **Waste transfer outside of Unit (external transport)**
   - Transporting medical waste from the storage in the unit to the final storage and treatment unit in Al-Basheer by a medical transporting vehicle dedicated for this purpose.
   - The process of packaging and labeling of waste containers to another location outside the unit is the responsibility of the waste generator.
   - General waste collected and transported to the nearest landfill by Grater Amman municipality.

The following matters are practiced and considered:

1. All necessary precautions introduced to prevent leakage of liquids from waste or spillage.
2. Transport workers know the instructions and procedures in the event of leakage or spillage of the transferred waste or any other accidents.
3. All workers committed to use the necessary personal protective equipment
4. The vehicle allocated for the transport of infectious and sharp medical waste only and not used for any other purposes.
5. The vehicle fitted with an airtight lid as the open vehicles is prohibited under any circumstances by the instructions.
6. The body of the vehicle containing the waste is separated from the driver's cabin.
7. The body of the vehicle containing the waste is designed in such a way as to prevent trauma from reaching waste in case of accidents.
8. The inner surface of the medical waste cabin is smooth, with no corners and easy to wash and disinfect.
9. Loading security equipment for loading of container are available.
10. The vehicle washed and disinfected at the end of each day or after each spill, in an appropriate manner.
11. The vehicle is easy to load, and unload.
12. The vehicle shows the biohazard symbol and labeled with Biohazard waste.
13. The name, address and telephone number of the carrier are written In case of an emergency.
14. Personal Protective Equipment (PPE) including: apron, gloves, goggles and safety shoes;

15. Essential cleaning and disinfection materials;
16. Spill treatment materials;
17. First aid kit with all necessary medical supplies.
18. Firefighting tools
19. The waste cabin in the vehicle is refrigerated.
20. Waste storage and treatment in Al Basheer hospital
21. The final storage and medical waste treatment unit located adjacent to the hospital and Blood bank.
22. The size and space of the storage site is commensurate with the volume of waste produced and the periodic transfer to it.
23. The storage has an easy access for transport and garbage collection vehicles.
24. To unauthorized persons not allowed to inter the Storage area and the treatment
25. Area easy to clean.
26. The floor is made of a solid, non-effective and smooth, easy to clean and sanitize fitted with a good drainage system.
27. The walls are smooth and polished at a height of at least 3 meters.
28. Water connection and wastewater drain.
29. Good lighting and good ventilation natural and industrial.
30. Ease of access for workers responsible for transporting and handling waste.
31. Availability of spillage equipment, firefighting equipment and washing basin.
32. The labeled with the "biohazardous" symbol indicating no access for unauthorized personnel.
33. Waste treatment and final disposal
34. The treatment / disposal of general non-hazardous waste is under the responsibility Greater Amman municipality.
35. The treatment / disposal of chemical and pharmaceutical waste (including Chemotherapeutic waste) is under responsibility of the MoE
36. The treatment / disposal of radioactive waste is under the responsibility of the Ministry of Energy and Mineral resources.
37. The treatment / disposal of highly infectious, infectious, sharp and pathological waste is regulated by the MoH as follows:
    - Class 1 highly infectious waste treated at the source of generation by primary treatment through appropriate sterilization - Autoclaving
    - B. Infectious, sharp and pathological waste treated onsite at treatment unit connected to Al Basheer hospital by non-incinerators environmental friendly steam treatment techniques built in with shredder.
38. Capacity of the 2-treatment equipment is around (2) thousand kg/ eight working hours.
39. Validation of sterilization is conducted by Environmental Health directorate personnel Inactivation to be sure that the of *Geobacillus stearothermophilus* spores at a four log10 reduction or greater every week.
40. Waste after treatment rendered in small pieces to provide decontaminated and unrecognizable waste before is disposed as non-hazardous general waste

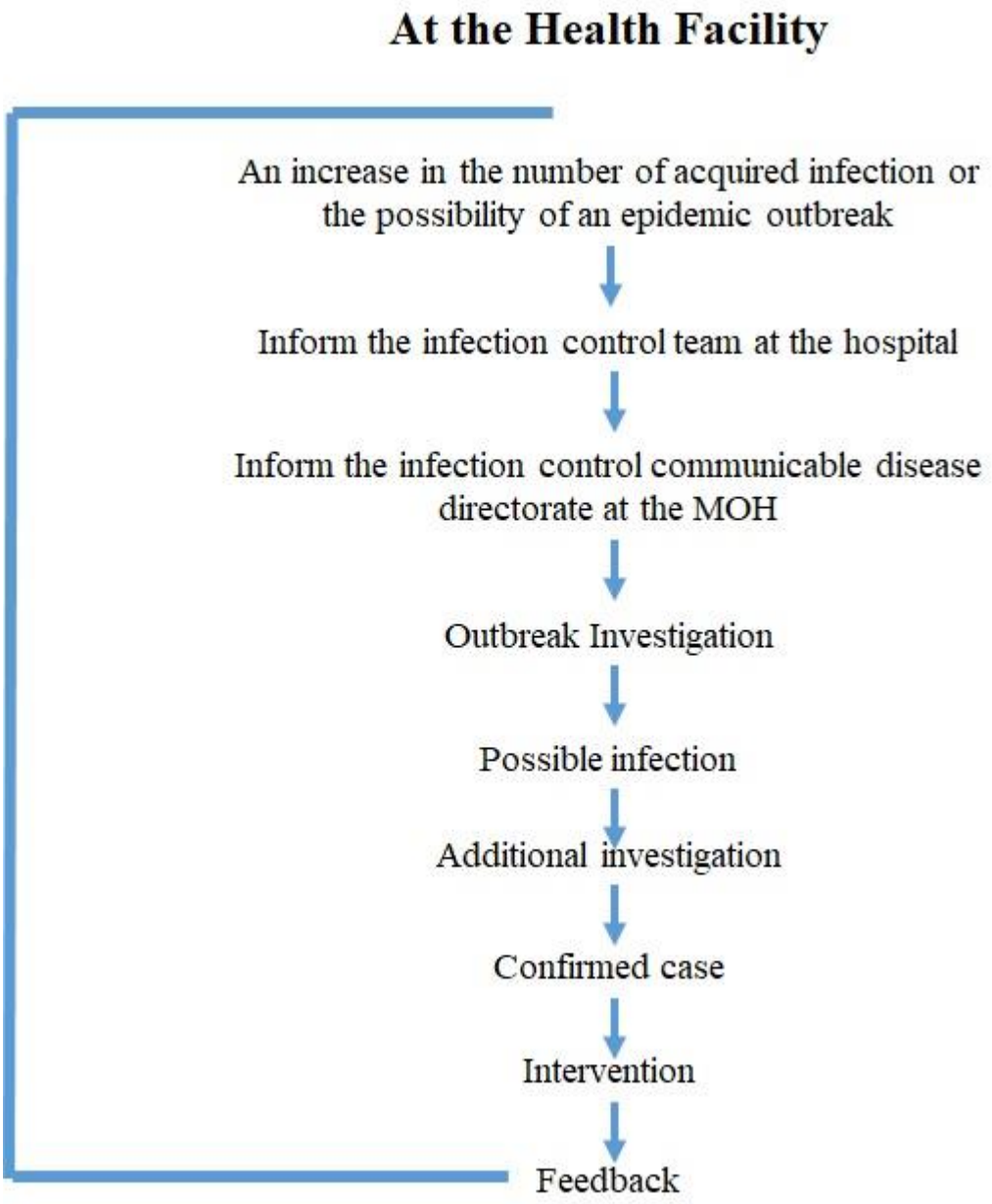
Medical waste management and disposal. The PIU and EHD will ensure the following:

- Each HCF is cope with medical waste instruction 1/2001 and practice the following ;
  1. Have policy and plan for medical waste management.
  2. Practice waste segregation, packaging, collection, storage disposal, and transport is conducted in compliance with WHO COVID-19 Guidelines;
  3. Have adequate plastic bags according to the colour coded in the mentioned instructions.
  4. Have adequate Sharp boxes for sharp waste.
  5. Onsite waste treatment will monitor regularly for validation of sterilization using biological indicators on a weekly basis.
  6. Quantities of medical waste generated should be registered including date and location of treatment. Integrate HCWM and associated infection control procedures
  7. The EHD team will audit quantities of waste treated at any off-site waste commercial treatment unit and disposal on a monthly basis to ensure that all generated medical waste treated properly and there is no open dumping .
  8. Ensure activities started with regard the medical waste treatment unit found in the police station an Albasheir removed and site receive rehabilitation works and the autoclave reinstalled in another location.
  9. Implement cleaning and disinfection policies' of public spaces, wards, ICUs, laboratory equipment, tools, and waste and medical waste storage are in place and according to the policy of cleaning and disinfection
  10. Ensure the availability of clean water and soap at hand washing and other sanitary stations are always supplied with clean water, soap, and disinfectant;
  11. Ensure equipment such as autoclaves, BSL2 in laboratories and medical waste treatment unit are in working order.
  12. Ensure the medical waste transporting vehicle working in a good condition.
  13. Ensure that that health care workers , cleaning worker medical waste handling and treatment worker are provided with proper PPEs,
  14. Ensure to cover the cleaning workers and medical waste handler , workers at medical waste treatment unit, drivers of medical waste transport vehicle with COVID 19 epidemiological investigation.
  15. Training and capacity building will to include cleaning workers and medical waste handler , workers at medical waste treatment unit, drivers of medical waste transport vehicle on tropics related to their work.
  16. Training program to include Medical waste segregation topic.
  17. EHD and PIU to ensure training is distributed equity.

4 Emergency Preparedness and Response (EPR)

This section aims to provide emergency response for the healthcare facilities with regard to the potential threat associated with both novel pathogen identified (COVID-19) and other non - COVID - 19 risks that could affect Health Care Facilities operations in line with the requirements of ESS4. Emergency incidents occurring in a HCF may include spillage, occupational exposure to infectious materials or radiation, accidental releases of infectious or hazardous substances to the environment, medical equipment failure, failure of solid waste and wastewater treatment facilities, and fire. These emergency events are likely to seriously affect medical workers, communities, the HCF's operation and the environment. The probability of negative event is very low although

Jordan has not handled infectious pandemic of the scale of COVID-19. The following chart illustrates the steps for investigating cases of hospital- acquired infections or a suspected outbreak according to the Infection Prevention and Control Manual published by the MOH of Jordan



The laboratories used in COVID-19 testing would adhere to the application of the WHO laboratory biosafety manual[33], WBG EHS and National Public Health Laboratory requirements and have well-established system for emergency preparedness and response. The operation of the laboratory shall adhere to the WHO Guidelines for laboratory biosafety guidance related to coronavirus disease (COVID19). At minimum the following shall be adhered to:

[33] https://www.who.int/csr/resources/publications/biosafety/Biosafety7.pdf?ua=1

- Initial processing (before inactivation) of all specimens shall take place in a validated Biosafety control
- Appropriate disinfectants with proven activity against enveloped viruses shall be used e.g. hypochlorite, alcohol, hydrogen peroxide, quaternary ammonium & phenolic compounds).
- Instill administration control measures namely: policy, purpose, distribution, definitions, etc.
- Organization of emergency areas (command centers, medical stations, Assembly Point etc.)
- Spell out clear roles and responsibilities for staff at the facility in line with Good Microbiological Practices and Procedures (GMPP)
- Institute clear communication systems to be followed at the facilities
- Ensure that PPE (gown with long-sleeves, waterproof apron, non-sterile gloves (over the cuffs of the gown), mask, eyes protection (preferable face-shield, or goggle), rubber gloves and rubber boots) are used at all times.
- Emergency Equipment: Procedures would be prepared for using, inspecting, testing, and maintaining the emergency response equipment.
- First-aid kits: including medical supplies such as bottled eye washes and bandages, should be available and easily accessible to personnel.
- Reporting of all Incidents at the laboratory and route cause undertaken,

All Healthcare personnel at hospitals, quarantine and isolation areas must be trained on highly infectious disease case management, with a focus on COVID-19 and have periodic refresher training to maintain competency. Adequate funding to procure and distribute IPC materials, drugs, supplies and medical equipment for prevention, investigation and management of the novel corona virus should be at disposal all the time. Measures will be taken to minimize hospital visits by people for minor health problems to avoid crowd and reduce over pressure to health facilities.

In the event that an emergency situation occurs in which the activities at the waste treatment facility poses a threat to the public's health as well as environmental contamination, the following need to be addressed immediately:

1. Identify the cause of emergency
2. Call for the external support from the County Emergency Departments/ Police
3. Notifying the workers and surrounding residents to take necessary protective measures according to the nature of the incident
4. Liaise with the county disaster risk department to organize the evacuation of the residents to safety, and determining the means of evacuation according to the weather and geographical conditions and the population density
5. Set up the emergency shelter outside the safety boundary of the incident site
6. The responsible entity in the emergency environmental incidents should take immediate actions to control or cut-off the source of pollution, taking all possible measures to control the situation, in order to prevent the secondary pollution and the derivative incidents
7. The field rescue team should be organized immediately if necessary to reduce the casualty and property loss
8. Individuals in the contaminated area should be evacuated to safety, and irrelevant individuals should be barred from the area.

Termination of emergency situation will follow these steps

1. The scene of incident has been under control, and the conditions for the incident to occur are removed
2. The leakage or release of pollution source has been limited within a stipulated scope
3. The hazard caused by the incident has been thoroughly removed and cannot cause any new incident
4. It is not necessary to continue to adopt professional emergency disposals at the incident site
5. Necessary measures have been taken for protecting the public from any secondary danger.

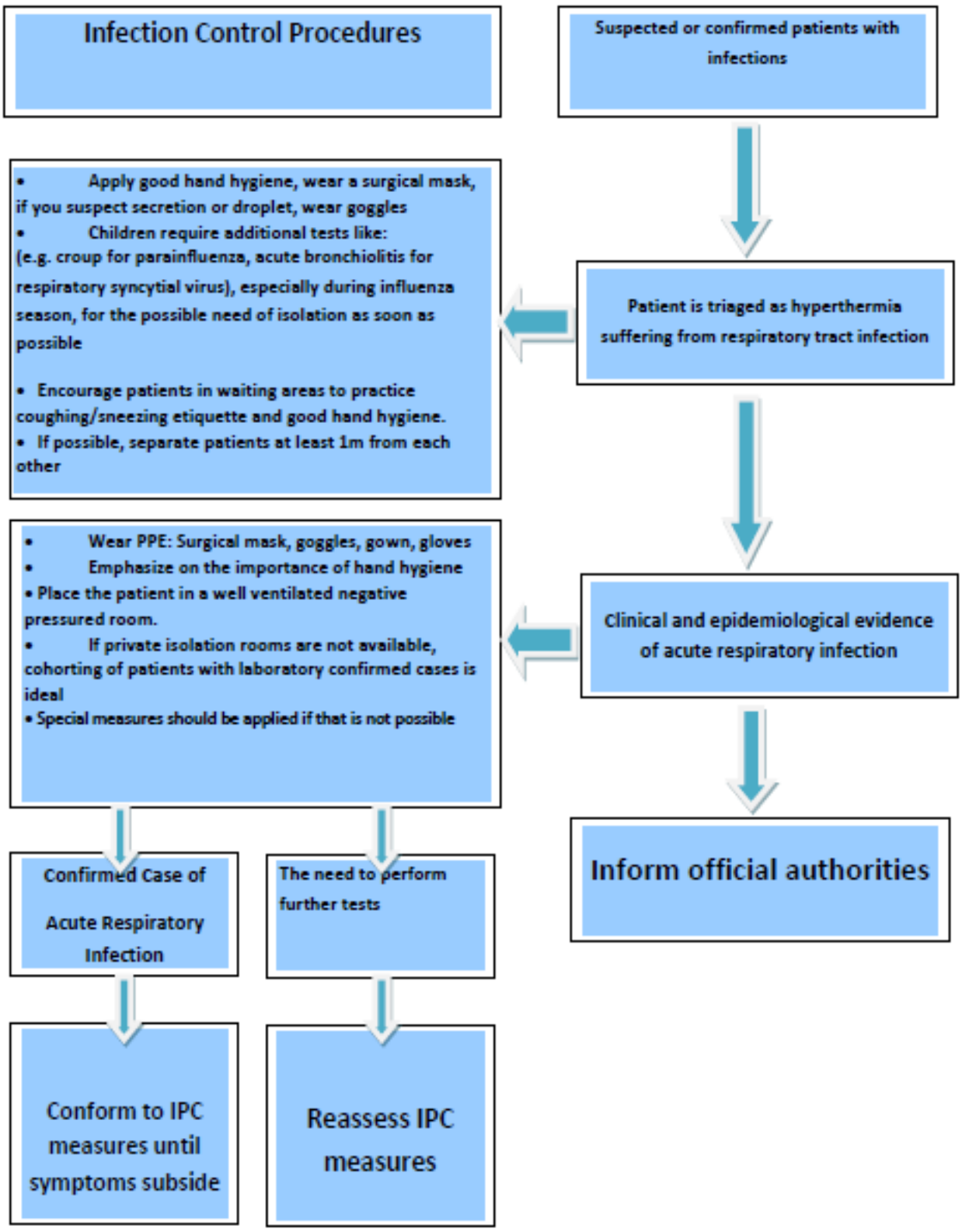


Figure 1 below illustrates the Prevention and Control Measures of Infections for confirmed patients

Infection prevention and control during health care for potential or confirmed infections of (CoVMERS)

WHO/MERS/IPC/15.1: precautions must be applied to control Infections that are transmitted through droplet and contact by wearing eye protectors in addition to applying standard precautions when dealing with suspected or confirmed infections of CoVMERS as per the following:

1 Patient admission / patient isolation
   - Patients with Suspected or confirmed infections must be admitted to a private room with good ventilation equipped with a separate bathroom and sync. It is preferred to use a negative pressure room
   - In case of non availability of a separate room, patients of the same diagnosis can be accommodated at the same room (cohort isolation) provided that a distance of 1 meter is considered between each bed and the other
   - Common medical tools must be allocated (sphygmomanometer, Thermometer, stethoscope) for each patient and keeping patients' files outside the room)
   - Paper tissues must be provided in addition to elbow disinfectants and cleaners
   - Putting a note on the door of the room to emphasize the necessity of following infection control instructions before entering
   - Limiting patient care to a minimum number of trained and qualified health staff.
   - Limiting the number of patient's visitors when possible and have only visitors who provide support for the patient.
   - Health staff and all visitors in case of entering the patient's room or the surrounding place must stay 1 meter away at least from the patient using personal preventive equipment
   - Wearing mask N95 and safety glasses
   - Long sleeve apron and gloves
   - Refraining from touching eyes, nose or mouth with hands or contaminated gloves
   - Maintaining hand hygiene before and after contact with the patient and their surrounding and after removing personal preventive equipment
2 Patient's movement between departments:
   - Avoid movement of patient unless extremely needed
   - Use a portable X ray machine and special diagnostic tools if possible, otherwise all tools must be cleaned and disinfected after each use
   - If patient movement is necessary, use the methods that reduce infection for visitors and health care staff
   - Inform the receiving entity for the patient to take all necessary precautions before patient's arrival
   - Ensure that the health care staff transferring the patient is using necessary personal preventive equipment
   - Ensure that the patient follows respiratory health etiquette and wears a surgical mask
   - Clean and sterilize surfaces contacted by the patient such as the bed after use
3 Environmental cleaning and disinfection of isolation rooms:
   - The room must be cleaned at least once a day and entirely when the patient is discharged
   - Tools and surfaces touched daily such as telephone, remote control, door knobs, device

surface must be cleaned and disinfected

- Cleaning must start from the least to most polluted places. Surfaces should be washed from top to bottom.
- Utility gloves and a mask must be used when cleaning.
- Disinfectants must be used according to instructions and according to the required concentration ratio and required duration for exposure
- Blood and body fluids spill should be cleaned carefully using safe methods wearing the appropriate personal preventive equipment (chlorine solution can be used with a concentration of 5000 parts per million 1 chlorine: 9 water for chlorine with 5% concentration and 10 minutes time of exposure

4 Medical waste management and food containers

- Collect Waste resulting from isolation room in a special red bag. It is preferred to process them first using autoclave then sending them to waste incinerator.
- When the outer part of the bag is contaminated, it must be put in another bag (double bag)
- Patient's fluids are disposed in wastewater
- Wash hands after disposing waste
- Place dirty sheets and clothes in a red bag
- Wash clothes and sheets in the routine way which the hospital follows
- Using hot water and detergents used in hospital's washing machine is sufficient to disinfect them (70 c is preferred) in case of non-availability, using hot water (70 c) and detergents is considered as sufficient as sterilization. Utility gloved must be used at the time of cleaning.

5 Collect and transport laboratorial samples:

- Consider all samples as potential infection sources. personnel that collects or transports samples must apply all standard precautions for infection control
- Emphasize on the importance of wearing proper personal protective equipment at the time of specimen collection
- Place the sample in a plastic bag that does not allow leakage closed and sealed separately and stamped with the sign of "biological hazard" and label with the name of the patient.
- Follow Laboratory safety procedures.
- Write the diagnosis and basic information clearly on the enclosed form.
- Laboratory personnel must be informed about the sample as soon as possible

6 Instructions of patient care at home

- Isolate the patient in a private room with a good ventilation
- The patient must not leave the home as long as symptoms remain unless the doctor advised otherwise.
- Visitors shall be informed to avoid direct exposure to patient before they enter the room
- Wash Hands with soap or 70% alcohol after dealing with or contacting the patient.
- Masks shall be used by health care provider and the patient inside the house.
- Consider cough etiquette (cover nose and mouth when sneezing or coughing with paper tissues and dispose them immediately after use in waste bin and wash hands afterwards)
- Avoid touching patient's secretions. Wear gloves and mask when dealing with patient's secretions

- Daily routine cleaning of room and surfaces. Chlorine can be used with 1:99 concentration "500 PPM"
- Follow up the visitors and contact persons
- Visit the doctor in case any symptom showed

3 Institutional Arrangement and Capacity Building

The MoH is the implementing entity for the Project, and has designated staff members to oversee the implementation of the activities and to ensure compliance with World Bank requirements. The ICWMP will be disseminated and implemented at national level. The project management team will collaborate with the Public Health responsible people designated to the project. Capacity on the content and application of the ICWMP will be built at all levels and be applied to all governorates, facilities and laboratories targeted by the Project. Monitoring and reporting of activities by the project management team will be continuous to ensure adherence to set specifications and safety to people and the environment.

Infection prevention and control is a fundamental component in which patients care rely heavily on to provide an infection-safe environment for workers and members of the society at the same. It is attained by following infection prevention and control policies and procedures despite the resources and capabilities available.

By developing, a strong organizational Structure that is clearly identifies roles and responsibilities of the persons in charge; it becomes an integral element for the continuous success of infection prevention and control programs. In Jordan, the organizational structure of infection control is done at all various levels (i.e. centrally, it is done at the level of the Ministry of Health, hospitals, and health directorates). The following illustrates the organizational structure

On The Central Level:

1. The National Committee for Infection Prevention and Control
2. Infection Control Department

The National Committee for Infection Prevention and Control

The Committee provides advice to prevent and control infection at the national level.

Committee Chairman: Secretary General of the Ministry of Health, or his/her representative.

Committee Rapporteur: Director of the Infection Control Department

Committee Members:

1. Director of Hospital Directorate
2. Director of Primary Healthcare Directorate
3. Director of Communicable Diseases
4. Director of Nursing Directorate
5. Director of Procurement and Supply Directorate
6. Director of Laboratory Directorate

7. Director of Blood Bank Directorate
8. Director of Dentistry
9. Representative from the Royal Medical Services (RMS)
10. Representative of the King Abdullah University Hospital
11. Representative of Jordan University Health Facility
12. President of the Private Hospital Association
13. Representative of the Jordan Doctors association
14. Representative of the Pharmacist association must be a clinical pharmacist.

Responsibilities of the Committee:

1. Approve infection prevention and control policies and procedures at the national-level
2. Coordinate between various health care sectors within the Kingdom to harmonize infection prevention and control programs at the national level.

Meetings and Agenda:

The Committee should be meet at least convene four times annually. Depending on the chairman's request, or when needed

Infection Control Department:

One of the departments at the Communicable Diseases Directorate. It is responsible of planning; supervising and following up on infection prevention and control activities taking place across the Kingdom's hospitals and health directorates.

Director of the Infection Control Department:

He/ she should be a community medicine specialist, or a physician who holds a Master's / PhD degree in public health, epidemiology, or anyone who has a special training in infection prevention and control.

- An epidemiologist
- A dentist
- A qualified registered nurse with extensive experience
- Sterilization technician
- Laboratory technician
- Pharmacist

Responsibilities of the Department:

- Design the annual infection prevention plan for the MoH.
- Supervision and training for the implementation of the plan.
- Solve problems related to infection prevention and control.
- Follow up and monitoring of hospital- associated infections.
- Prepare and issue reports periodically.
- Participate in providing necessary supplies and consumables to MoH, related to prevent and control infections.
- Supervise the implementation of infection prevention and control policies and procedures at hospitals and healthcare centers in both public and private sectors.
- Give feedback to hospitals and health directorates at the public and private sectors.

- Coordinate with various local, regional and international agencies in relation to infection prevention and control.

Infection Control Committees at healthcare institutions

At The Hospitals levels: An infection control committee should be formed in every healthcare facility, which is responsible on carrying out infection prevention and control activities within the institution departments.

Members of the Committee:

1 **Chairman:**
   - The director of the healthcare facility or representative.

2 **Members:**
   - Three members from the main medical departments: (Internal medicine, surgical,
   - gynecology and pediatric)
   - The supply personnel at the health facility.
   - Head of the Infection Control Unit (Committee Rapporteur)
   - Head of nursing, or his/ her deputy.
   - Personnel in charge of the Quality improvement Unit.
   - Personnel in charge of the Laboratory, or deputy.
   - Personnel in charge of the pharmacy, or deputy.
   - Personnel in charge of Central sterilization Department.
   - Members of the infection control team.
   - Other health personnel as needed.

Responsibilities of the Hospital Infection Prevention and Control Committee:

- Adopt general policies of infection prevention and control that are derived from the Infection Prevention and Control Department at the Communicable Diseases Directorate/ MoH.
- Adopt the annual infection prevention and control plan within the healthcare facility.
- Apply infection prevention and control policies at the health facility.
- Train all personnel (doctors, nurses, technicians and workers) on infection prevention and control.
- Epidemiological investigation of health facility infections.
- Immediate reporting of an epidemic outbreak to the Infection Control Department at the Communicable Diseases Directorate/ MoH.
- Support the work of the Infection Control Team.
- Provide necessary requirements to implement the infection prevention and control plan.

Meetings: The committee convenes monthly, and forward the minutes of meetings to the Infection Control Dept/ Communicable Diseases Directorate.

Infection Control Unit/ Team:

Depending in the number of beds available at the health facility, the number of infection control personnel is determined, provided that the number of beds assigned to a well-trained infection

control personnel is not more than 120 beds. The unit shall be responsible for running and executing infection prevention and control programs within the health facility.

Members of the Infection Control Team at the Health facility:
The team comprises of a unit head, an assistant or two registered nurses, or qualified heath care workers who've underwent special training and have certificates in the field of infection prevention and control. This number is subject to increase, as per the number of beds at the facility.

Roles and Responsibilities of the Infection Control Unit:

- Prepare and develop the IPC annual plan, and get approved by the infection control committee.
- Provide necessary consultations and instructions to health personnel on topics related to infection prevention and control procedures.
- Revise and implement standards (infection prevention and control policies and procedures)
- Follow up and monitoring surveillance program.
- Conduct an educational training plan for workers that are updated year-round, to raise awareness by covering all infection prevention and control aspects.
- Train workers on infection prevention and control practices, to be applied within the health facility.
- Continue to providing necessary requirements and equipment to assist infection prevention and control. Inform the Infection Control Committee at the facility should there be any shortages.
- Conduct continuous investigations during an epidemic outbreak in coordination with the Infection Control Dept/ Communicable Diseases Dir.
- Prepare monthly reports of all the activities that had taken place within the facility, and share the findings with the infection control committee for discussion.
- The infection control team provides its recommendations to workers of all departments at the health facility.
- Follow up any exposures from infectious agents.
- Inform the infection control committee about any infections within the facility

Functional Tasks for Hospitals Infection Control Program

First: Surveillance for hospital acquired infection
Surveillance: This is a continuous process that includes data collection, analysis and interpretation. Also, it requires dissemination of some health issues, in order to take necessary decisions that limit mortalities, and number of infected people,

Health care Associated Infection Surveillance
It is limited to monitoring hospital-acquired infections by collecting infection data, their locations and agents within hospitals. Upon reporting, feedback should be obtained through data analysis and by taking appropriate interventions. Health care associated infection **Surveillance** is one of the most vital functions to prevent and control infection.
Monitoring hospital-acquired infection could be utilized in many aspects, as follows:

- Early detection of abnormal hospital infection increase.

- Monitor epidemiological patterns and changes of diseases that spread in hospitals.
- Make appropriate interventions based on the monitoring data.
- Evaluate infection prevention and control programs adopted at the hospital.
- Identify health requirements and needs.
- Establish a database for research and studies.

4 Monitoring and Reporting

During the operation period, the environmental issues will be monitored by the Ministry of Health Project Management Team (PMT). Monitoring will verify if predicted impacts have actually occurred and check that mitigation actions recommended in the ICWMP are implemented and their effectiveness. Monitoring will also identify any unforeseen impacts that might arise from project implementation. Monitoring will be done through site inspection, review of grievances logged by stakeholders and ad hoc discussions with potentially affected persons. Monitoring will consist of checking to see if the proposed measures are being adequately implemented, it is required to follow-up on decisions made to intervene in various activities of infection prevention and control and medical waste management to minimize risks to people, animals, and the environment. To ensure that objectives of the ICWMP are achieved, the implementation of the plan shall be monitored on a regular basis.

Table 5: Infection Control and Waste Management Baseline Mitigation Measures for HCC / Laboratory / Isolation Areas

Activities	Potential E&S Issues and Risks	Proposed Mitigation Measures	Timeline
General HCF operation – Environment	General wastes	• Use of waste containers that encourage segregation to hold waste on site before its collection • Use of durable, long-lasting materials that will not need to be replaced often • Contract approved waste handler in Jordan to dispose of hazardous waste and have waste destruction certificate and waste transfer notes. • Designate temporal waste / garbage holding areas at site. • General waste in the case of handling COVID-19 patients should be treated as infectious waste	Quarterly
	Waste water	All infectious effluents should be discharged into the public sewer system or soak pits only after being pre-treated according to WHO standards / EMCA (Water Quality Regulations, 2006.)	Quarterly
	• Air emissions (dioxins, furans, arsenic, lead, cadmium, chromium, mercury, etc. • Risks by direct exposure (inhalation) or in-direct exposure (deposited in soil, water, plants, etc.	• Controlled procurement process to ensure quality and efficient incinerators • Prohibit open burning of medical waste on site • Siting of the incinerators should be away from the health facilities wards, residential areas and farms • Ensure the incinerators used in the health facilities are fitted with scrubbers to reduce on release of pollutants to be in compliance with the Air Quality standards.	Biannual
General HCF operation OHS issues	• Physical hazards • Chemical use	• All workers should be provided with appropriate PPE against exposure to hazards • Training for all staff should be given on safe work practices /OHS and guidelines and ensure that they adhere to it • The medical facilities and equipment should be regularly maintained to correct any electrical faults,	Biannual

		• Strategic display on OHS Policy and regular review of the policy by the manager • Proper maintenance of PPE, including cleaning when dirty and replacement when damaged or worn out • Proper use of PPE should be part of the recurrent training programs for employees • Emergency eye-wash and shower facilities should be equipped with audible and visible alarms to summon aid whenever the eye-wash or shower is activated by the worker and without intervention by the worker • Ensure adequate provision of safety systems which should cover fire, electrical emergencies with First-aid areas or rooms suitably equipped and readily accessible should be available • Provision of first aid kits and first aiders trained the relevant personnel on first aid, and Materials safety data sheet for all chemicals used especially at the lab should be hanged on notice boards.	
	Electrical and explosive hazards	• All electrical repair activities should be done by competent electrician • Ensure the Biomedical department in the health facility has a qualified electrician to address the electrical faults • Prepare and implement Emergency response plan, Emergency Contacts, Periodic maintenance of electrical equipment, and Consider safe storage of supplies and undertake precaution with respect to explosives.	Annually
	Fire	• Prepare and implement Fire emergency response plan • Training of fire marshals in the facilities • Early identification of risks and instituting proactive measures to avoid. • Provide fire extinguishers to healthcare facilities during their renovation • Ensure servicing and inspection of the firefighting equipment	Quarterly

		• Fire emergency telephone numbers should be displaced in communal areas. • Undertake fire drills at healthcare facility, at a minimum once quarterly	
	Radioactive hazard	• All radioactive materials should be handled safely to prevent harm to people and environment. • HCF operators should develop a comprehensive plan to control radiation exposure in consultation with the affected workforce, radioactive waste should be stored in containers that prevent dispersion behind lead shielding. • Waste that is stored during radioactive decay should be labelled with the type of radionuclide, the date and details of the required storage conditions • Radioactive hazard plan should be refined and revised as soon as practicable on the basis of assessments of actual radiation exposure conditions, and radiation control measures should be designed and implemented accordingly, and Places of work involving occupational exposure to ionizing radiation should be provided with requisite protection (PPE) in accordance with recognized international safety standards and guidelines	Quarterly
Waste minimization, reuse and recycling	• Potential increased generation of waste • Risk in spread of COVID-19	• Procure medical supplies & equipment from accredited suppliers preferably in small quantities • Waste generated from care of COVID-19 patient should not be re-used	One time
HCF operation - Infection control and waste management plan	Possible risks of infection	See section 4 above	Quarterly
Delivery and storage of specimen,	Infection to lab attendants - Expiry of medical supplies and pharmaceuticals		

samples, reagents, pharmaceuticals and medical supplies			
Storage and handling of specimen, samples, reagents, and infectious materials	Infection to lab attendants		
Waste segregation, packaging, color coding and labeling	Increased generation of infectious waste due to poor segregation practices	• Segregation of wastes into different categories for control of quantities and disposal methods • Waste containers should be of the same color as the bags and fitted with lids	Quarterly
Onsite collection and transport	• Infection to the waste handlers • Non segregation of waste • Increased generation of infectious waste due to contamination	• Ensure proper waste management practices as recommended by the WBG EHS guidelines, WHO Safe waste management guidelines for improvement waste management and Health care waste management plan 2016-2021. • The collection of waste would be made at least once in 24 hours, and it would be done in such a way to minimize nuisance of smell and dust during collection and all the waste collected must be carried away from the storage site to an approved disposal point. • Provide appropriate waste bins for the different types of waste generated in the laboratory to allow segregation and collection at the point of generation.	Quarterly
Waste storage	• Littering of waste • Contamination of surfaces	• Segregation of wastes into different categories for control of quantities and disposal methods. • Provision of color coded waste bins with lid, • Provision of appropriate PPEs for waste handlers and incinerator operators	Quarterly

		• Decontamination of surfaces	
Onsite waste treatment and disposal Incineration	• Pollution to environment discharges of contaminated waste water • Emissions from the incinerator	• Adopt the suggested design for the waste treatment facility, if an incinerator, see section 1. • Waste segregation at point of origin to reduce on waste generated, • Ensure operator of incineration unit is adequately trained to ensure efficient operation. • Provide the required PPE to operators and waste handlers • Periodic maintenance of the incinerator through cleaning of combustion chamber and de-clogging the air flows • Routine inspection of furnace and air pollution system by the regulatory authority	One tine
Waste transportation to and disposal in offsite treatment and disposal facilities	• Littering of wastes • Disposal in no permitted waste sites	• Offsite transportation of waste should comply with the national regulations • Keeping record of waste transfer notes as well as waste destruction certificates at the point of disposal facility. • Use the appropriate vehicle type for transportation of HCW off site • Staff should be aware of emergency procedures for dealing with accidents and incidents of spillage during transportation on public roads • Due diligence should be undertaken for all the waste treated off site to ensure waste is transported through the required routes (non-busy route) and safely treated and disposed	Weekly
HCF operation – trans boundary movement of specimen, samples, reagents, medical	• Importation of substandard medical supplies and equipment • Illegal importation • Classes of dangerous goods • Improper handling and stowage	• Procure medical supplies & equipment from accredited supplier • Proper handling of equipment use, and methods of storage from cradle to crave	On need basis

equipment, and infectious materials			
Emergency events	• Spillage, Fire & others	• Emergency response plan(s) for specific emergencies, • Regular drills would constantly follow on various possible incidences. This will test the response of the involved stakeholders. Such drills will keep them alert and they will become more responsive to in the case of incidences. • Train relevant staff on response in risk management and emergency procedures in-case of accidents and spillages.	Quarterly
	• Failure of solid waste and wastewater treatment facilities;	• All HCFs should prepare waste management procedures in accordance with the national requirements that outline waste segregation procedures, on site handling, collection, transport, treatment and disposal, and training of the staff.	
	• Accidental releases of infectious or hazardous substances to the environment;	• Train relevant staff on response in risk management and emergency procedures in-case of accidental releases of infectious or hazardous substances, and Provision of receptacles for timely response of accidental releases.	
	• Occupational exposure to infectious;	• Ensure the provision of safe water, sanitation, and hygienic conditions, which is essential to protecting human health during all infectious disease outbreaks, • Health facilities shall establish and apply good practices line with WHO guidance on water, sanitation and waste management for COVID-19 and National guidelines for Infection Prevention and Control in the healthcare facilities.	
	• Medical equipment failure	• Provide requisite training during equipment installation. • Carry out regular supervision, ensure only trained authorized personnel operate equipment, • The manual containing information on how the medical facilities and equipment should be safely handled should be made available to the relevant staff,	

		• Equipment's should be sanitized and disinfected before use to minimize risks of infections	
Operation of acquired assets for holding potential COVID-19 patients	• Nonuse of the equipment due to lack of technical knowhow • Risk of misuse of the equipment • Poor maintenance leading to breakdown	• Ensure equipment purchased is of the required standard and specifications, • Ensure good control measures in purchase of medical equipment, • Equipment's should be disinfected before use to minimize risk of infections • Provide requisite training during equipment installation, • The equipment's manual should be made available to the medical workers for safe routine procedures • Prepare maintenance plan for all equipment	Quarterly
Blood Collection Storage and delivery	• Unsuitable for transfusion	• Blood units found to be unsuitable for transfusion should be promptly removed from the blood stock, • Place the blood units in a steel container with a lid or in an auto-cleavable polythene bag as the bags may burst while being autoclaved and cause blood to spray out	Quarterly
	• Injuries from sharps • Risk of infectious waste • Exposure to harmful toxins like dioxin and furans	• Disinfect infectious liquid waste (e.g. blood samples used for testing, infectious effluent from test procedures) by chemical treatment using at least 1% sodium hypochlorite solution. • Only after 30 minutes or more of exposure to the disinfectant, may the inactivated liquid waste be discharged into drains/ sewers for safe dispersal.	Quarterly
Handling of dead bodies in the case of COVID-19	• Risk of spread of the disease	• Use full PPEs (disposable gown with long sleeves, water proof apron, disposable gloves, surgical mask, eye protection, rubber gloves and boots, surgical masks to safely handle; • No washing, spraying/ embalming the dead body; • Register contact(s) at the HCF, • Notify the HCF Director / MOH director • Follow up on health status of the staff	

Annex VII: Template TORs For Third Party Monitoring

Objectives:

An introductory section should briefly present the Project, the monitoring goals and objectives and how it fits in the overall scheme of project implementation. B. Tasks divided in major project phase, or location or type of activity This section should provide a general outline of the monitoring program and attach the detailed ESCP/ESMPs, as well as Resettlement Action Plan, Stakeholder Engagement Plan, or other relevant documents. The Borrower should highlight any specific incidents/accidents/events/changes in project or project schedule that need to be taken into account. A link should be provided to the environmental and social documents, where available on a website, so that the prospective monitor can understand the complexity of the assignment.

Planning of monitoring visit: provide proposed parameters (schedule, meetings proposed, locations, any complex travel logistics, and so forth). List of initial documents to be reviewed and data to be made available

Schedule: For single monitoring trips, preferred timing window and duration of visit. For longer monitoring assignments with multiple trips: preferred timing window for first visit, estimate of frequency of visits during each phase (for example, quarterly visits during construction, annual visits during operation, higher frequency during sensitive phases…), expected duration of each visit. Expectation of initial and close out meetings for Borrower/Project Implementation Unit, as appropriate.

Scope of discussions with stakeholders: provide some context, locations of communities to be visited (if large-scale project, suggested numbers and locations to be confirmed by selected monitor), and background on key issues and impacts that might be raised (which can influence which specialist is most appropriate to undertake the assignment)

Methodologies to be used, or request expert/monitoring firm to propose methodology

Any technology requirements, and any specifications for format and content of output needed in monitoring report, so that the Borrower can access and analyze the information for its own use and/or reporting

Reporting/Outputs Clarify the focus/purpose of the reports, how findings should be presented/rated, and how conclusions and recommendations should be presented. Propose changes to ESCP, where appropriate; updates to the Stakeholder Engagement Plan, and so forth. Reports should be sent to the Borrower and the Bank at the same time for feedback on any factual inaccuracy. This allows the Bank to see initial and independent recommendations. To ensure independence and credibility, evidence-based conclusions and recommendations of the third-party-monitor should be maintained unless there are factual inaccuracies on which the conclusions and recommendations are based.

The Borrower should provide the Bank with their comments to the monitor regarding the report. In controversial or complex projects, the draft report may be shared publicly for maximum transparency and to build trust. Clarify expected language of reporting and intended audience.
Qualifications: The TORs should list the following:

- Expertise needed: minimum or range of number of experts, and specialty areas needed to be covered depending on issues in the scope agreed. These may include: project management and specialists on environmental or social issues, indigenous peoples, public health, biodiversity, resettlement, health and safety, labor, communications and stakeholder engagement, and capacity building.
- Expected level of expertise, such as types of degree or certification (for example, environmental, social, engineering), and acceptable combination of level of education and years of experience
- Experience with/knowledge of international and World Bank standards, the local context, the project sector, applicable regulations
- Language skills needed, and confirmation that the contractor will provide support for setting up logistics locally, such as meetings, clarity on which party will provide translation, and so forth.

Require CVs of all key personnel and organization's experience and credentials. These are needed to demonstrate to the World Bank that the experts/specialists are appropriate for the required scope of work.

Once a monitor is accepted, personnel should not be substituted without permission and should have equivalent expertise.

Eligibility/independence requirements For example (a) absence of existing contracts with Borrower contractors on the project, and (b) no participation in earlier phases of the project or in the design of environmental or social programs associated with the project. The more complex and controversial the project, the higher the eligibility and independence needed.

Duration of contract and minimum commitment Expected minimum and/or maximum duration of contract, as applicable and any minimal commitment expected from the third-party monitoring provider.

Excluded costs Logistical support, travel and accommodation that will be provided by Borrower that should not be included in the cost estimate. H. Conflicts of Interest disclosure Any past or current arrangements that would prevent the third-party from providing advice independent of the Borrower and the project

Confidentiality and proprietary information Any specific arrangements for reports and other outputs to be confidential or proprietary to the Borrower J. Format of proposal The TORs should indicate how the cost estimate should be made for undertaking the monitoring assignment: by task, sub-tasks, expected number of people, and daily rate and/or lump sum. If tasks in the TORs are not fully defined, clarify how the budget should approach these tasks.

Annex VIII: Public Consultation Workshop

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Ministry of Health

Jordan COVID-19 Emergency Response Project
Ministry of Health

وزارة الصحة

www.moh.gov.jo

SUBMITTED BY THE MINISTRY OF HEALTH
To the World Bank February 16 2021

Contents

Objectives

The public consultation workshop was conducted to achieve the following objectives

1. Disseminate information about the project
2. Discuss project´s impacts, risks, and proposed mitigations, including subproject´s screening, categorization, review, approval and monitoring
3. Gather contributions, suggestions and recommendations to be incorporated in the final Environmental and Social Management Framework (ESMF) to be submitted to the World Bank.

Meeting Details

Date: February 16th 2021

Location: Virtual meeting through Zoom application

Time: 09:00am until 10:00am Jordan time

About the Meeting

The meeting was opened by Mrs. Huda Ababneh, Director of Decentralization from the Ministry of Health in Jordan with welcoming participants, and providing an introduction about the project. Mrs. Ababneh described that background behind the project that was initiated by the Ministry of Health in 2020, in conducting an assessment to identify the gaps in capacities in detection and response to COVID-19. Based on this assessment, a support was provided by WHO to the MOH to develop its National Preparedness and Response Plan (NPRP) for COVID-19, which was concluded in February 2020. Therefore, the World Bank has supported the Ministry of Health of Jordan to implement a COVID-19 Emergency Response Project following its National Preparedness and Response Plan for COVID 19. In addition, she has provided a brief description on the project components and activities.

This was followed by a presentation on the ESMF document by Mr. Ehab Eid, Environmental Specialist at the Ministry of Planning and International Cooperation. The presentation included several elements including an introduction about the ESMF and the rational behind. This was followed by describing the 10 Environmental and Social Standards (ESS), and a highlight that only applicable ESS are those contained in the ESMF based on the project objectives and directions. In addition, the components of the ESMF was provided including background, project description, policy, legal and regulatory framework, environmental and social baselines, potential environment and social risks and mitigation, procedures to address environmental and social issues, consultation and disclosure, stakeholder engagement and the project implementation arrangements, responsibilities and capacity building. Examples on the composition of the policy, legal and regulatory framework was provided as well as illustrating in details the risks and mitigation measures was provided.

Finally, the project implementation arrangements, public disclosure of subprojects as well as the grievance redressing mechanism to be used during the project implementations.

Meeting Remarks

The final session was opened for discussion, reflections and observation by the participants, where the following remarks was collected:

Question by Dr. Abeer Mwaswas, Health Awareness Directorate

How procurements of good and services occurred in this project? Have you been following the World Bank regulations and standards?

Answer by Mrs. Huda Ababneh, Director of Decentralization

Procurement should follow Jordan's government procurement process, which is similar to the World Bank standards. A procurement expert was contracted as per the regulations of the World Bank. In addition, Mrs. Ababneh stated that the Ministry of Health has reserved and filed all procurements documents in a special database, which is also a requirement of the World Bank.

Remark by Dr. Dr. Majed Assad, Primary Health Care Director

The Ministry of Health has implemented many activities related to the COVID-19 pandemic, and Jordan has been distinguished by various measures to confront this epidemic, including the mechanism for dealing with medical and hazardous waste, training and capacity building and other matters that were clarified during the presentation, and this is internationally recognized for the Ministry of Health and Jordan.

Answer by Mrs. Huda Ababneh, Director of Decentralization

The efforts from the MOH is certainly acknowledged, and very well recognized at national and international levels. The ESMF from the World Bank was developed to ensure having all information available in one document that are consistent with the national mandates and priorities.

Question by Ms. Farah Harsh; Medical equipment engineering directorate

How can we get a copy of the ESMF to read, and keep in our records?

Answer by Mr. Ehab Eid, Environmental Specialist from MOPIC and Mrs. Huda Ababneh, Director of Decentralization

A copy of the ESMF will be available at the MOH, as it will be accessible to all

After answering these question, and commenting on the remarks, Mrs. Huda Ababneh, Director of Decentralization closed the meeting by thanking everyone for their contribution, time and commitments.

Attendance

The following table provides the list of participants of this virtual public consultation workshop

#	Name	Affiliation	Sex	
			Male	Female
1	Farah Yousef Harsh	Medical equipment engineering directorate		√
2	Dr. Majed Assad	Primary Health care director	√	
3	Dr. Abeer Mwaswas	Health Awareness Directorate	√	
4	Mr. AlaEddin Alkharabsheh	Environmental Health Directorate	√	
5	Dr. Huda Ababneh	Ministry of Health		√
6	Dr. Taiseer Ferdous	Ministry of Health	√	
7	Ms. Tanseem aliswed	Environmental Health Directorate		√
8	Mr. Mazen Malkawi	CEHA/WHO	√	
9	Dr. Emad Abu Yaqeen	Director, Irbid Field Hospital	√	
10	Ms. Heba Safi	CEHA/WHO		√
11	Ms. Suzanne Hejawee	Infection prevention- Ministry of Health		√
12	Ms. Bayan Awwa	Waste management - Ministry of Health		√
13	Ms. Maysoon Bseiso	Private sector		√
14	Mr. Khaldon Khader	Director, Amman Field Hospital	√	
15	Mrs. Ghada Shqour	MOPIC		√
16	Ms. Tosy Abed	Ministry of Health		√
17	Mr. Ehab Eid	Environmental Specialist from MOPIC	√	

Agenda

Jordan COVID-19 Emergency Response Project
Public Consultation Workshop

Date: February 16th 2021
Time: 09:00-10:00am
Location: Virtual through Zoom

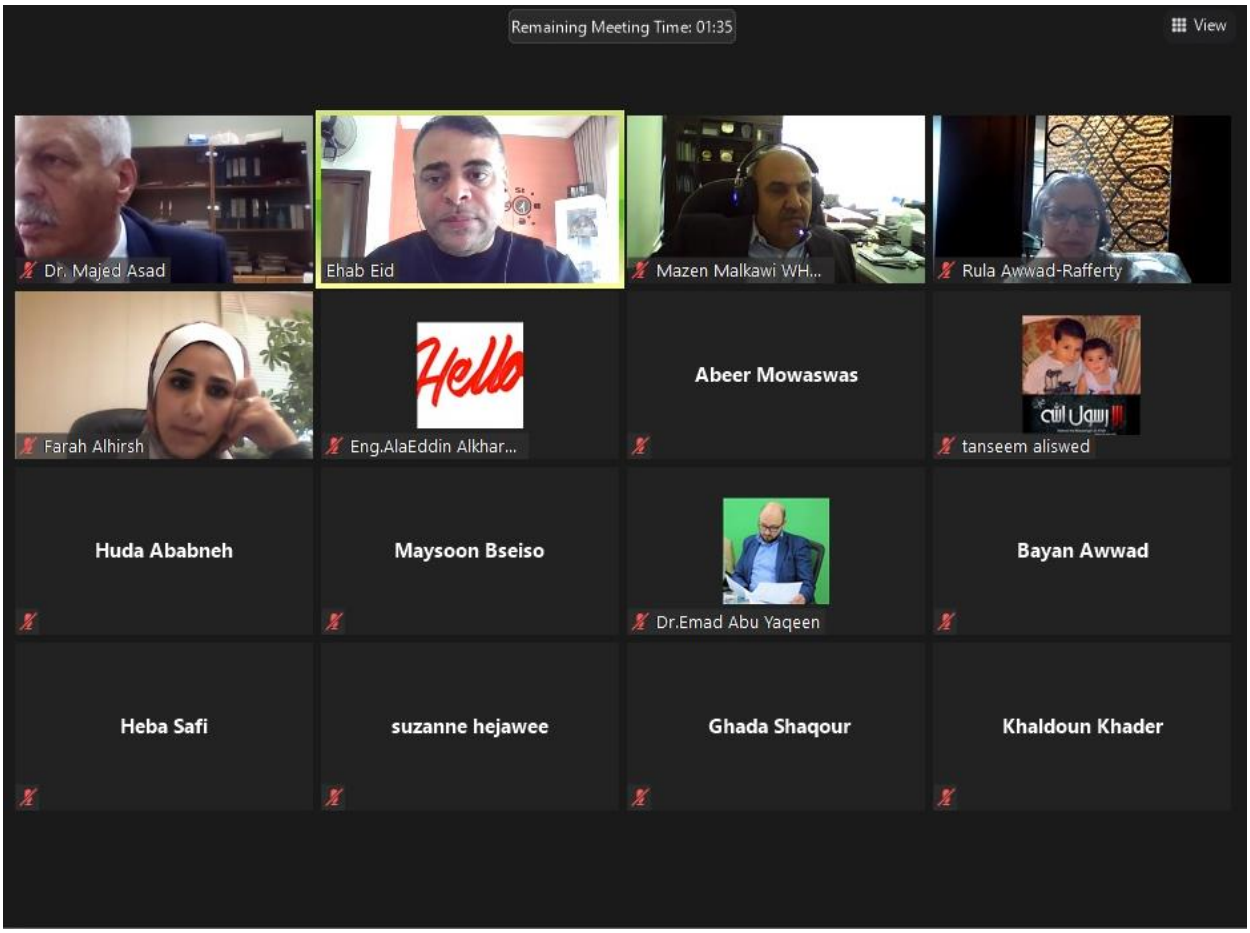
Objectives

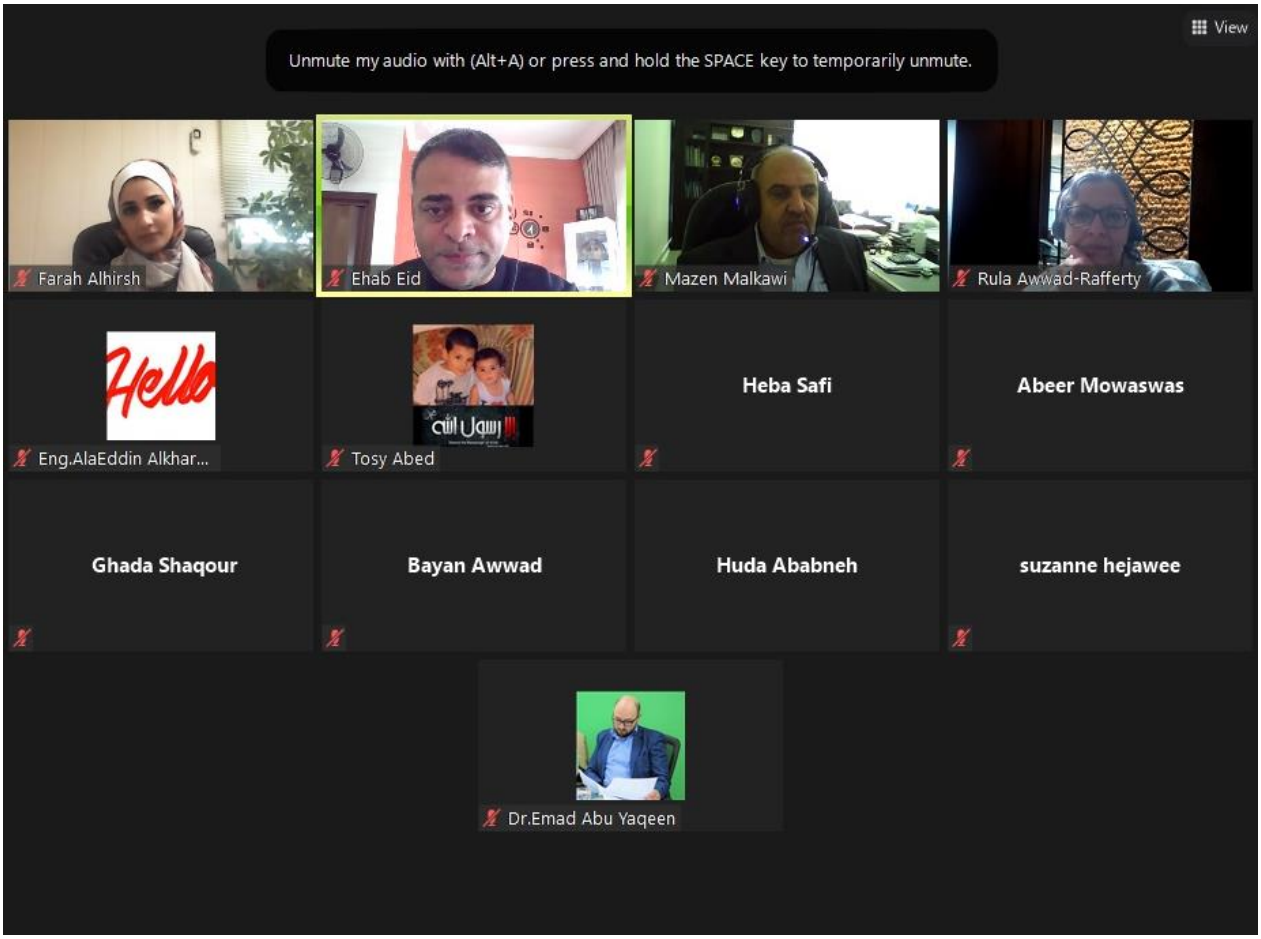
1. Disseminate information about the project
2. Discuss project´s impacts, risks, and proposed mitigations, including subproject´s screening, categorization, review, approval and monitoring
3. Gather contributions, suggestions and recommendations to be incorporated in the final ESMF to be submitted to the World Bank.

Agenda

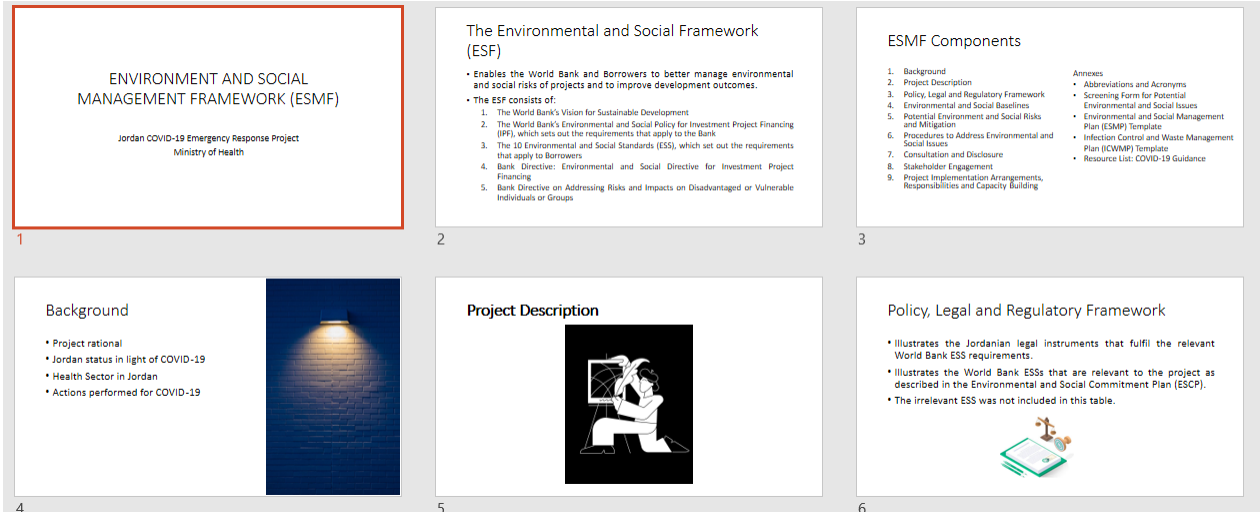
Time	Task	Responsibility
09:00 – 09:05 am	Opening • Welcome participants • Workshop objectives	Ehab Eid, Environmental Specialist- MOPIC
09:05 – 09:15 am	About the project	Eng. Huda Ababneh- Ministry of Health
09:15 – 09:40 am	ESMF • About ESMF • Risks and Mitigation measures	Ehab Eid
09:40 – 10:00 am	Discussion and conclusion Facilitation: Ehab Eid	Ehab Eid

Photos





PowerPoint Presentation



Policy, Legal and Regulatory Framework

ESS1 Assessment and Management of Environmental and Social Risks and Impacts

It sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project

ESS relevant to the ESCP of the project

- The Project will prepare, disclose and adopt an Environmental and Social Management Framework (ESMF) to assess the environmental and social risks and impacts of proposed Project activities, and to ensure that individuals or groups who, because of their circumstances, may be disadvantaged or vulnerable, have access to the development benefits resulting from the Project.

Relevant legal instruments in Jordan

Article (3) and 4-M of the Environmental Protection Law No. (6) of 2017: Articles states that the Ministry of Environment is the authority responsible for protecting the environment in the Kingdom, and it is responsible for monitoring and measuring the elements and components of the environment.

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Policy, Legal and Regulatory Framework

ESS2 Labor and Working Conditions

It recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions

ESS relevant to the ESCP of the project

Adopt, implement and update the Occupational Health and Safety (OHS) measures in line with the ESMF, LMP, Infection Prevention & Waste Management Plan (IPC&WMP) and WHO guidelines on COVID-19 in a manner acceptable to the Association.

Relevant legal instruments in Jordan

Jordanian Labor Law no. (8) of 1996: Article (10) states that the Ministry shall assume the functions of organizing the labor market, occupational guidance and formulation of the instructions necessary for providing work and employment opportunities to Jordanian citizens within and outside the Kingdom in collaboration with the concerned parties. In addition, Chapter Nine: Safety and Occupational Health, Article (78) provided an extensive texts on the necessity to provide precautions and measures to protect the Employees from the hazards and diseases that may result from the work as well as from machines used therein

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Policy, Legal and Regulatory Framework

ESS3 Resource Efficiency and Pollution Prevention and Management

This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life-cycle

ESS relevant to the ESCP of the project

- manage health care wastes, and other types of hazardous and nonhazardous wastes and use of resources (water, air, etc.) in accordance with ESS3.

Relevant legal instruments in Jordan

- **Public Health Law No. 47 of 2008 and its amendments** : Article (46) of Chapter Ten (Chapter on Health impairment) defines medical waste resulting from health care facilities as a health annoyance and dislocation; and Article (48) of the same law prohibits causing health dislocation .

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Policy, Legal and Regulatory Framework

ESS4 Community Health and Safety

Addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable

ESS relevant to the ESCP of the project

- Minimize the potential for community exposure to communicable Diseases
- Ensure that individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable, have access to the development benefits resulting from the Project

Relevant legal instruments in Jordan

- **Public Health Law No. 47 of 2008 and its amendments** : Article (46) of Chapter Ten (Chapter on Health impairment) defines medical waste resulting from health care facilities as a health annoyance and dislocation; and Article (48) of the same law prohibits causing health dislocation .

Policy, Legal and Regulatory Framework

ESS10 Stakeholder Engagement and Information Disclosure

Recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice

ESS relevant to the ESCP of the project

- Prepare, disclose, adopt, and implement a Stakeholder Engagement Plan (SEP)
- Accessible grievance arrangements shall be made publicly available to receive and facilitate resolution of concerns and grievances in relation to the Project, consistent with ESS10, in a manner acceptable to the Bank

Relevant legal instruments in Jordan

- National law recognizes the importance of accredited independent consultants or Environmental Non-Governmental Organizations ENGOs and environmentally concerned CBOs to be established according to law

Environmental and Social Baseline

- Provide a baseline information about the environmental and social characteristics of Jordan

Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Procurement of goods and supplies	Procure goods and services following the governmental procedure and the procurement plan
	Identify the capacity of the market and supply chain to meet the demand
	Procure goods and supplies based on technical specifications provided by WHO interim guidance for coronavirus disease 2019
	Given the emergency nature of the project and the supply chain constraints due to global pandemic crisis, the MOH may leverage existing arrangements by directly contracting UN agencies to supply major medical equipment and supplies. If requested by MOH, the WBG may provide Bank Facilitated Procurement (BFP) to proactively assist in accessing existing supply chains for the agreed list of critical medical consumables and equipment needed under the project
	Recruitment of a qualified and experienced Procurement Officer familiar with WBG procurement regulations.
	A Technical Audit will be required to verify the contracting approach, the appropriateness of prices, the adherence to agreed procurement procedures, the quality of the goods, whether these were delivered to the designated final destinations, and the appropriate use of funds for the intended purposes.

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Financial Management	A part-time Finance Officer, experienced in WBG-funded projects and FM- and disbursement-related guidelines, will handle the FM and disbursement functions
	A budget line item for the project's estimated annual disbursements will be added to the 2020 (and onwards) national budget to ensure quick disbursements
	A US Dollar Designated Account (DA) managed by the MOH will be opened to receive advances
	Retroactive financing of 40 percent of the amount will be reimbursed to the government at a bank account of their choice that is different from the DA

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Medical waste management and disposal	Identification of current methods of medical waste management and disposal
	Identification of any on-site facilities for disposal of medical waste including incinerators, pits for burning medical waste, pits for burial of medical waste, etc.;
	Identification of any off-site disposal of medical waste, including how material is gathered and stored, routes taken to the disposal facility, and disposal procedures;
	Review of protocols for dealing with medical waste specifically related to infectious diseases like COVID-19;
	Review of training procedures for healthcare workers and other relevant HCF employees for medical waste management and disposal
	Audit any off site waste disposal required on a monthly basis and institute any remedial measures required to ensure compliance
	Compliance with the WBG General EHS guidelines and the "WBG EHS Guidelines for Healthcare Facilities
	Have policy and plan for medical waste management

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Medical waste management and disposal	Practice waste segregation, packaging, collection, storage disposal, and transport is conducted in compliance with WHO COVID-19 Guidelines and the national instructions
	Have adequate plastic bags according to the color coded in the mentioned instructions
	Onsite waste treatment will monitor regularly for validation of sterilization using biological indicators on a weekly basis
	Quantities of medical waste generated should be registered including date and location of treatment
	The EHD team will audit quantities of waste treated at any off-site waste commercial treatment unit and disposal on a monthly basis to ensure that all generated medical waste treated properly and there is no open dumping
	Ensure activities started with regard the medical waste treatment unit found in the police station an Al-Bashir removed and site receive rehabilitation works and the autoclave reinstalled in another location
	Implement cleaning and disinfection policies' of public spaces, wards, ICUs, laboratory equipment, tools, and waste and medical waste storage are in place and according to the policy of cleaning and disinfection

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Medical waste management and disposal	Ensure the availability of clean water and soap at hand washing and other sanitary stations are always supplied with clean water, soap, and disinfectant
	Ensure equipment such as autoclaves, BSL2 in laboratories and medical waste treatment unit are in working order
	Ensure the medical waste transporting vehicle working in a good condition
	Ensure that that health care workers, cleaning worker medical waste handling and treatment worker are provided with proper PPEs
	Ensure to cover the cleaning workers and medical waste handler, workers at medical waste treatment unit, drivers of medical waste transport vehicle with COVID 19 epidemiological investigation
	Training and capacity building will to include cleaning workers and medical waste handler, workers at medical waste treatment unit, drivers of medical waste transport vehicle on tropics related to their work
	Training program to include Medical waste segregation topic

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Protecting healthcare workers	Determination if the design of facility should to meet requirement for IPC in healthcare facilities and take into account guidance from WHO and/or CDC on COVID- 19 management and infection control
	Determination if the design of laboratory should take into account guidance from WHO Laboratory biosafety guidance related to COVID- 19
	Determination if training given to healthcare workers and other employees is adequate
	Determination if adequate stores of PPE are available on-site
	Identify if healthcare workers shall be provided with medical personal protective equipment (PPE) includes: Medical mask, Gown, Apron, Eye protection (goggles or face shield), Respirator, Boots/closed work shoes

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
COVID-19 testing and diagnosis	Collection of samples, transport of samples and testing of the clinical specimens from patients meeting the suspect case definition should be performed in accordance with WHO interim guidance Laboratory testing for coronavirus disease 2019 (COVID-19) in suspected human cases.
	Tests should be performed in appropriately equipped laboratories by staff trained in the relevant technical and safety procedures
	Samples that are potentially infectious materials need to be handled and stored as described in WHO document Guidance to minimize risks for facilities collecting, handling or storing materials potentially infectious for polioviruses
	For general laboratory biosafety guidelines, see the WHO Laboratory Biosafety Manual, 3rd edition
	Tests should be performed in appropriately equipped laboratories by staff trained in the relevant technical and safety procedures

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Containment of COVID-19	Quarantine procedures for COVID-19 patients are maintained
	Patients in quarantine are not discriminated due to socioeconomic status, level of education, gender, disabilities and any other vulnerabilities
	When practical, COVID-19 patients are given access to phone or other means of contact with family and friends to lessen the isolation of quarantine
	Patients in quarantine have access to development and project related information and should be able to take part in consultation through appropriate means
	The public is regularly updated on the situation and reminded of protocols to prevent the spread of COVID-19
	Follow up the WHO quarantine guidelines

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Poor Management of Medical Waste	Waste segregation, packaging, collection, storage disposal, and transport is conducted in compliance with the WHO COVID-19 Guidelines, and the national instructions
	Onsite waste management and disposal will be reviewed regularly and training on protocols conducted on a weekly basis
	The treatment of healthcare waste produced during the care of COVID-19 patients should be collected safely in designated containers and bags, treated and then safely disposed
	Open burning and incineration of medical wastes can result in emission of dioxins, furans and particulate matter, and result in unacceptable cancer risks

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Poor handling and Management of Hazardous Materials	They develop a hazardous material management procedure
	Hazardous materials should be handled in accordance with the accepted practices.
	Only trained personnel should handle the materials and precautions taken when handling materials by using required protection equipment such as ventilation hoods and personal protective equipment.
	Management of medical waste should be in compliance with the WBG General EHS guidelines " and the "WBG EHS Guidelines for Heath care Facilities
	Healthcare workers are at high risk of sharps injuries. Therefore, regular Hep B vaccine for healthcare workers should be secured. In addition, healthcare facilities should maintain stock of PEP in case of occupational HIV transmission from infected sharps to healthcare personnel

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Potential Environmental and Social Risks and Mitigation

Activities and Potential E&S Issues and Risks	Proposed Mitigation Measures
Decommissioning of interim of quarantine facilities will lead to waste generation	Any temporary quarantine facilities will be decommissioned on notice and will be demolished as per the demolition management guidelines;
	The facility will be sprayed with disinfectant prior to demolition/dismantling and all demolition/dismantling waste will be managed as per the national laws and bylaws.
	All workers partaking in these activities will adhere to the typical occupational health and safety requirements outlined in the construction stage section and at minimum ensure adequate PPE is worn, including helmets, boots, gloves and masks.
	All medical equipment will be decommissioned as per the manufactures requirements and disposed where relevant in accordance with the manufacturer's requirements.

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Procedure to Address Environmental and Social Issues

Screening

- All activities undertaken by the project will be screened using the form provides in the Annex II in order to exclude certain high or substantial risk activities, identify potential ES issues, and classify the ES risks. Copies of each of these screening forms will be kept at the EHD responsible staff members. The EHD periodic report to the Bank will include copies of each screening undertaken during the subject quarter.
- The EHD will prepare and implement the necessary ES instruments for each of the activities financed under the project

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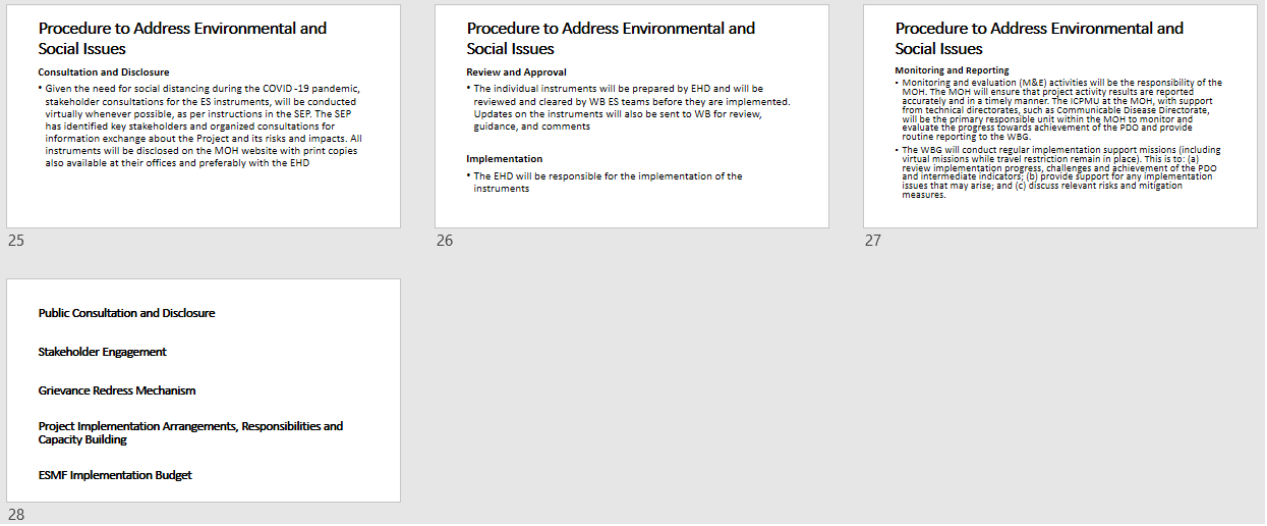
Procedure to Address Environmental and Social Issues
Consultation and Disclosure
• Given the need for social distancing during the COVID-19 pandemic, stakeholder consultations for the ES instruments, will be conducted virtually whenever possible, as per instructions in the SEP. The SEP has identified key stakeholders and organized consultations for information exchange about the Project and its risks and impacts. All instruments will be disclosed on the MOH website with print copies also available at their offices and preferably with the EHD
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Procedure to Address Environmental and Social Issues
Review and Approval
• The individual instruments will be prepared by EHD and will be reviewed and cleared by WB ES teams before they are implemented. Updates on the instruments will also be sent to WB for review, guidance, and comments
Implementation
• The EHD will be responsible for the implementation of the instruments
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Procedure to Address Environmental and Social Issues
Monitoring and Reporting
• Monitoring and evaluation (M&E) activities will be the responsibility of the MOH. The MOH will ensure that project activity results are reported accurately and in a timely manner. The ICPMU at the MOH, with support from technical directorates, such as Communicable Disease Directorate, will be the primary responsible unit within the MOH to monitor and evaluate the progress towards achievement of the PDO and provide routine reporting to the WBG.
• The WBG will conduct regular implementation support missions (including virtual missions while travel restriction remain in place). This is to: (a) review implementation progress, challenges and achievement of the PDO and intermediate indicators; (b) provide support for any implementation issues that may arise; and (c) discuss relevant risks and mitigation measures.
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Public Consultation and Disclosure
Stakeholder Engagement
Grievance Redress Mechanism
Project Implementation Arrangements, Responsibilities and Capacity Building
ESMF Implementation Budget
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