ISLAMIC REPUBLIC OF IRAN

Iran COVID-19 Emergency Response Project

Additional Financing

Environmental and Social Management Framework

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Background

The COVID-19 pandemic is posing a major challenge for health care systems around the world. Upscaling laboratory capacity is particularly needed to enable the early interruption of the transmission of the coronavirus (COVID-19). Providing high quality hospital diagnostic and curative services including intensive care require specialized equipment to be available in sufficient number.

In the Islamic Republic of Iran, the Ministry of Health and Medical Education (MOHME) is in charge of all decisions regarding health care strategic planning and resource allocation, and the ministry is considered as the ultimate authority to oversee, license, and regulate the activities of both public and private health providers in the country. There are 66 medical universities providing public health and medical services, scattered in 31 provinces. The medical universities are in charge of providing public health, environmental health, public medical services and supervising private sector services in the specified catchment areas.

Contracted by the MOHME, the World Health Organization (WHO) is implementing the Iran COVID-19 Emergency Response Project (ICERP). The MOHME and WHO are committed to delivering on all project deliverables for helping to save lives by serving communities. ICERP made a major contribution to the availability of more advanced equipment in public sector laboratories and hospitals across the country for the control of COVID-19 and the treatment of hospitalized COVID-19 patients.

The ICERP financial resources were fully disbursed within 9 months of implementation and all results achieved within 14 months and the MOHME is now requesting Additional Financing (AF) to procure additional essential life-saving medical equipment to support the country's COVID-19 response. The proposed AF is in response to the evolving pandemic in the country. Iran has the highest number of cumulative confirmed COVID-19 cases (3.76 million) in the Eastern Mediterranean Region (EMRO) region. It has been experiencing a series of COVID-19 waves. The fifth wave started in July 2021 and currently records the highest number of daily new confirmed COVID-19 cases in the country since the beginning of the pandemic. Therefore, there is an urgent need to enhance the capacity of laboratories and health facilities in the country to cater to increased caseloads for testing and treatment of COVID-19 through the provision of essential equipment and consumables.

The AF design will remain the same as the parent project with a single component: procurement and distribution of selected essential, life-saving medical equipment for COVID-19 response. Implementation arrangements for the additional financing of ICERP will remain in place including a project implementation unit (PIU) with senior technical participants of the WHO Country Office (WCO) and MOHME who will manage the project as required and necessary to achieve its goals.

This Environmental and Social Management Framework (ESMF) is the managerial instrument for managing environmental and social aspects of the project by determining the principles, rules, and guidelines for managing E&S risks of the additional financing activities. The ESMF includes

national and international standards related to the project concept and sets out E&S criteria in accordance with the World Bank Environmental and Social standards (ESSs). This framework adopts the principles of proportionality and flexibility in addressing risks and monitoring activities in the same approach and principle as the parent project. This ESMF has been prepared to document the experience of the parent project and to capture the issues related to associated activities (i.e., minor civil works in healthcare facilities).

Project Description

ICERP aims to support the country in responding COVID-19 emergency with providing technical guidance to procure medical and laboratory lifesaving equipment and reagents for civilian facilities including hospitals and laboratories selected based on the eligibility criteria. Some minor civil works may be required to adjust and prepare existing facilities for installment of the equipment which will be clarified after finalizing list of items and selected facilities.

The project will assess infection prevention control measure and waste management procedures in the context of the project and manage proper operations and logistics throughout its lifetime. Several types of workers will be engaged in the project as the main labor: project implementation unit (PIU) workers, contracted workers by MOHME (and facilities) and supplier workers. This project doesn't include any road or major constructions.

The parent project demonstrated good practices in good collaboration between GoIRI, WHO and World Bank, robust selection of beneficiary facilities, efficiency and savings in procurement by WHO, implementation of environmental and safeguards (E&S) measures, and independent verification of results by a Third Party Verification Agency (TPVA).

A systematic process was followed in selecting civilian hospitals to receive essential lifesaving equipment under the project, using clear selection criteria outlined in the Legal Agreement which took into account the population and poverty levels in facility catchment areas as well as the population needs for COVID-19 services.

On this basis, 182 civilian public health facilities, which included 137 hospitals and 45 laboratories, covering all 31 provinces were selected. All of them serve as primary referral points for the people and particularly the poor (figure 1).

Figure 1: Map of Iran showing 182 facilities in 31 provinces in the parent project

Strong adherence to Environmental and Social standards was achieved in the parent project. In this regard a firm was engaged within three months of effectiveness (August 2020) to undertake a comprehensive E&S assessment of beneficiary facilities in three phases as follows:

- Preparatory phase: National and international documents specifying the framework and regulations of the environmental, occupational, and patient safety standards including WHO guidance and recommendations were collected; an assessment tool specifically related to readiness of the facilities regarding above standards to receive and operate the ICERP procured equipment was developed and finalized through a pilot in three of the selected facilities.
- Facility assessments phase: To conduct the environmental and occupational health assessments in the dimensions related to the procured items at the project hospitals and laboratories, using the developed and standardized checklist. The assessment includes the environmental, occupational and safety standard for healthcare facilities staff and patients in relation to the use of the equipment and reagents procured. According to the results of the assessment findings, all sites graded regarding level of compliance and identified gaps related to the environmental, occupational, and patient safety standards.

- Follow-up phase: Following and based on the findings and recommendations of the site-assessment phase, all selected hospitals and laboratories provided with follow up monitoring services during the full ICERP implementation period to ensure that the environmental, occupational health and patient safety standards related to the installation and operation of the ICERP procured equipment are sustained. It was the responsibility of the hospital and laboratory management and the MOHME to address the assessment findings and recommendations.

Environmental and Social Performance of the Parent Project

The initial assessment phase of the parent project started in July 2020 and ended March 2021 results of which showed that out of 182 beneficiary facilities, 37 were fully compliant, 145 had non-conformities. On this basis, the Ministry of Health and Medical Education (MOHME) implemented improvement plans, recommended by the World Health Organization Country Office (WCO) and E&S assessment company, in the facilities with identified gaps prior to distribution of equipment. By December 2020, 96 percent of the facilities had been graded as compliant with E&S protocols and ready to receive the medical equipment. As of May 2021, all 182 facilities have been graded as fully compliance or green grade, meeting the E&S standards. The detailed implemented activities of the E&S assessment and developed products in the parent project are available in annex 5 and 6. It is worth mentioning that no project-related incidents have been reported.

A Third-Party Verification Agency (TPVA) was hired by WCO under the parent project to conduct post-delivery visits to all beneficiary facilities to verify the delivery, installation, training, and use of the medical equipment as well as E&S compliance in the facilities. The recruited TPVA has verified the maintained E&S standards for the delivered/installed medical and laboratory equipment in all 182 beneficiary facilities.

A grievance redress mechanism (GRM or GM) was also jointly established by WCO and MOHME under the project. This included a dedicated extension to the MOHME hotline and a dedicated email address. Awareness of these tools was created by the distribution of project fact sheets and posters to medical facilities across the country and by announcing them at the end of all project video clips published on the WCO's Instagram page. During the course of implementation, given the infrequent use of these tools, WCO and MOHME introduced a more active stakeholder engagement process to complement the GM by engaging the TPVA to organize beneficiary consultations during their site visits.

The E&S lessons learned document of the parent project is available in Annex 3 in which E&S assessment is mentioned as a successful foundation and basis in the project management, risk identification and mitigation and communication framework aspects for the rest of ICERP. Also, MOHME expressed that the developed E&S assessment tool has helped enrich the current standards and contributed to strengthening the capacity and quality of the systems in place. This includes for the hospital accreditation process and policies for scaling up health system and infrastructure development, and standards of laboratories to join the national health network of molecular detection (including COVID-19). One of the major achievements pointed out during the interviews was the collaborative and constructive communication framework built among

MOHME, universities of medical sciences (UMS), health facilities, TÜV Nord Iran and WCO. This can however be further improved by shortening communication pathways and identifying teams who can deliver the messages directly to target partners. This is expected to facilitate improvement of any non-conformities that are identified during implementation smoothly.

The project is designed to provide Additional Financing (AF) for the Iran COVID-19 Emergency Response Project to procure additional essential life-saving medical equipment to support the country's Coronavirus Disease 2019 (COVID-19) response. General information of the parent project is provided below which also applies to the additional financing.

1. *Project development objective (PDO)*

   The PDO of the project is to improve the availability of selected essential, life-saving medical equipment for COVID-19 response.

2. *Project component*

   Procurement and distribution of selected essential, life-saving medical equipment for COVID-19 response.

3. *Project implementation activities*
   - Prevent and limit the spread of COVID-19 through providing immediate support to enhance quality and availability of the needed medical care
   - Identification, quantification, specification of life-saving medical equipment urgently needed for COVID-19 patients through conducting WHO open international bidding procedure to select the equipment suppliers. Under the parent project, each of the contracted international suppliers had a local agent to facilitate different logistics in the country. The equipment was supplied from different countries (e.g., Germany, Netherlands, Italy, China, Japan … etc.). The same approach is expected to be followed in the AF, where having a local agent is a condition to win the international bid.
   - Procurement and distribution to selected health facilities, and, where required, installation of the medical equipment at the selected end-users. Transportation of equipment will be through air, water and land as implemented in the parent project. In the parent project, WCO, in consultation with MOHME, prepared a strategic plan and logistics framework based on a comprehensive market research to expedite equipment distribution. The logistics plan comprised of the following main steps: (i) customs clearance: which is arranged by the local agents who are responsible to provide the needed documentation; (ii) site readiness: in terms of space, infrastructure, and E&S eligibility; (iii) warehousing: where the equipment is shipped from the port of entry for distribution. It is worth noting that if cold storage is required, proper storage arrangement will be applied according to WHO standards; (iv) distribution: to ready facilities. It is worth noting that if controlled temperature transportation required, proper transportation arrangement will be applied according to WHO standards; (v) handing over: at the healthcare facilities; (vi) installation

of the equipment: which may require minor civil works; and (vii) training on the operation of equipment provided by the supplier. The main environmental and social risks associated with the logistics framework is the transportation of equipment and minor civil works at healthcare facilities, which are further discussed later in this report.

- Safeguarding environmental, occupational health and safety standards for healthcare facilities staff and patients related to installation and operation of medical equipment and laboratory reagents to be procured through ICERP
- Each healthcare facility will have an E&S assessment to be recognized as eligible for receiving the designated equipment
- Reports of the environmental and social assessment of health facilities and an improvement plan to address the potential gaps, including stakeholder engagement activities, GRM and the grievances received.
- E&S risks with focus on the recognized group of non-conformities in the parent project will be identified with proposed mitigation measure(s) to address and resolve them
- Minor civil work may be required to adjust the installation room of the designated healthcare facility based on the type of equipment
- Transparency through monitoring, reporting and verification, considering required security arrangement by MOHME.
- Green graded facilities will be verified for the maintained E&S standards after delivering/installing the equipment
- Provision of regular information about ICERP progress and establishment of grievance redress mechanisms

4. Eligibility and criteria for exclusion of activities

The Project excludes the following types of activities:

- New construction that may involve permanent resettlement or land acquisition
- Activities that may have negative impact on indigenous people or other vulnerable minorities and their respected rights
- Activities that may have significant adverse social impacts and may give rise to significant social conflict
- Activities that may have long term, permanent and/or irreversible adverse impacts
- Activities that may cause serious adverse effects to human health and/or the environment not related to treatment of COVID-19 cases.

Policy, Legal and Regulatory Framework

1. National and international laws, regulations, and standards

During the parent project there were sets of policies, laws, and regulations according to which the assessments conducted. The list of relevant laws, regulations, and standards (occupational,

environmental health and patient safety) are included in the information package prepared (Annex 2) including specific national required documents and permits for CT scanner, Biplane angiography and Portable X-ray machines.

Identified additional documents required for the AF are listed in table 1 (national), and table 2 (international).

Table1: National law, regulations, and standards applicable to the AF project

National References	
No	**Reference Title**
1	[2005] Necessary equipment for various vehicles in the road network traffic: Traffic Regulations Article 54
2	[2005] Cargo Transportation Regulations: Traffic Regulations Article 78
3	[2020] Driver's Health Certificate: MOHME Bylaw 300/4391
4	Project Site Safety, covering traffic regulations and safety requirements: Iranian Road Safety Regulations
5	[2020] Guidelines for the prevention of Corona disease and other acute respiratory infections in the workplace during an epidemic

Table2: International laws, regulations, and standards applicable to the AF project

International references		
No	**Organization**	**Reference Title**
1	World Bank	[2007] Environmental, Health, and Safety Guidelines for Health Care Facilities
2		[2019] Environment & Social Framework for IPF Operations Road Safety
3	World Health Organization	[2020] Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19
4		[2021] COVID-19: Occupational health and safety for health workers
5		[2021] Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed
6		[2018] Road Safety Strategy for the United Nations System and its Personnel A Partnership for Safer Journeys UNITED

2. *National Legislations*

As the additional financing of ICERP covers importation, procurement, and distribution of medical equipment and supplies to prevent and control COVID-19 pandemic, it has no connection with road construction and major construction. Therefore, for the road safety, the focus will be on safe driving and abiding to the national laws. According to Article 138 of the Constitution and the Board of Ministers' approval, National Road Safety Commission (NRSC) was established in 2003 as National Road Safety Lead Agency. The Commission's main functions include coordination of road safety-concerned ministries, organizations, and other entities, policymaking, and monitoring and evaluation of the relevant indicators. Representatives of all stakeholders are members of NRC of which the main members include National Emergency Medical Organization (NEMO), Road Maintenance and Transportation Organization (RMTO), and Traffic Police. NRSC other members include Minister of Roads and Urban Development, deputy ministers of Interior, Industries and Mines, Education, Health and Medical Education, ICT, and representatives from Budget and Planning Organization, the Islamic Republic of Iran Broadcasting, Traffic Police, Attorney General's, and the Parliament.

For managing wastes related to the project, national standards are in line with international standards (WHO guidelines[1]) which already considered in the assessment tool used in the parent project (Annex 2). As stated in the "Law on Health Care Waste Management and Rules and Procedures for the Executive Management of Medical Waste and Related Waste" all medical waste producing facilities are obliged to separate regular and medical waste at source. Treatment of infectious and sharp wastes in large producing medical waste facilities (e.g., hospitals) in medium and large sized cities must be done before transportation and disposal. Waste will be transported only to the final destination, determined in the permit, issued by MOHME and Department of Environment (DOE) and without wasting time. Transportation of medical waste with normal waste in not allowed. Ensuring health and safety (e.g., personal protective equipment) of the waste disposal workers is executive waste management responsibility.

Constitutional laws on labor management with consideration of terms and conditions of employment, protecting the workforce and keeping them safe and healthy has been long in place in the country.

The E&S assessment tool developed in the parent project to assess the eligibility of healthcare facilities includes seven cluster of questions with references to the above-mentioned laws, regulations, standards, and legislations (both national and international). Additional questions, as and if applicable to the project will be included later on as the project progress.

3. *World Bank Environmental and Social Framework standards*

These standards are listed in table 3 indicating their relevance to the project with the justification.

[1] Safe Management of Wastes from Healthcare Activities and on Water, Sanitation, Hygiene and Waste Management for COVID-19

Table 3: Relevant and irrelevant ESSs to the project

Environmental and Social Standards (ESSs)	Relevance	Justification/Remarks
ESS1 Assessment and Management of Environmental and Social Risks and Impacts	Relevant	Environmental, occupational, and patient safety standards are required to be satisfied at the facilities where receive the equipment procured through ICERP. The assessment tool developed in the parent project that will be slightly updated for AF is the instrument to ensure that.
ESS2 Labor and Working Conditions	Relevant	All workers under ICERP need to be protected in terms of all occupational health and safety standards. Through assessment instrument or contractual agreements, these conditions will be ensured.
ESS3 Resource Efficiency and Pollution Prevention and Management	Relevant	All facilities receiving equipment need to have energy efficiency and pollution prevention and management system in place. The assessment tool includes measures on these components.
ESS4 Community Health and Safety	Relevant	Community and patient health and safety are required to be satisfied at all the facilities receiving equipment, and not affected negatively. Partially through the assessment tool, and partially by stakeholder engagement plan these components are considered.
ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Relevant	The Project is limited to procurement and distribution of goods and will not involve any economic or physical displacement resulting from land acquisition or restriction to land use.
ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Relevant	The project is not anticipated to affect or involve activities with impacts on biodiversity or natural resources.
ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Relevant	The project doesn't impact or involve indigenous people.
ESS8 Cultural Heritage	Not Relevant	The project doesn't impact any cultural heritage.
ESS9 Financial Intermediaries	Not Relevant	The project doesn't involve any financial intermediaries.
ESS10 Stakeholder Engagement and Information Disclosure	Relevant	Stakeholder engagement, grievance redress mechanism, and information disclosure are considered as concerns of ICERP and are ensured. Through the stakeholder engagement plan these components are considered.

Environmental and Social Baselines

This nation-wide project is defined to procure and equip public health facilities in 31 provinces all around Iran. Iran COVID-19 response additional financing will continue supporting the country to

deliver and install life-saving equipment to the designated facilities. Iran's population is mainly distributed in the urban areas with major healthcare facilities located in areas that can provide the maximum coverage of service, which is a requirement of the locations receiving equipment under AF.

Along with various technical and clinical departments, the MOHME have developed many modalities of screening environmental and social aspects related to health care facilities. Based on these modalities and environmental, occupational, and patient safety standards (national and international), a checklist of 60 questions were developed in the parent project, which is the main baseline and reference of this second phase, as well (annex 2).

This checklist is focused on the specific project objective and is different from the hospital accreditation system in Iran. The accreditation system is implemented by the hospital management center of curative affairs to grade and rank hospitals. Health and safety of the personnel and patients along with the environment considerations are the main areas of this monitoring system which assess the facilities every two years. The accreditation system implemented by MOHME in Iran is a ranking mechanism to evaluate the performance of healthcare facilities based on various criteria, among which there are environmental, occupational, and patient safety indicators. Although there are overlaps in the criteria included in the project checklist/baseline assessment tool and the accreditation criteria, as the objective and mechanism adopted for the two are different, the accreditation documents are only used as reference and the checklist developed under the parent project is used for baseline E&S assessments.

The ICERP E&S assessment tool assesses the readiness status of the facilities to receive the designated equipment. The grading system does not indicate the rank of the facility, but rather the level of readiness based on device E&S standards as per the checklist (green to red). For more information on the assessment criteria carried out in the parent project, please refer to annex 2.

The public health network is established by MOHME and it is the responsibility of UMS in provinces to enforce the public health measures through public health network. The public health network is supervising the related environmental and occupational health standards at laboratory levels in coordination with national reference public laboratories of MOHME.

Environmental and occupational health center at MOHME is setting and monitoring the standards and guidelines in the country to keep the workforce safe and sound in all working conditions including healthcare facilities. National guidelines on environmental health and occupational health are developed and endorsed by MOHME and executed in the country in the level of universities of medical sciences (health deputy) and public health centers.

Potential Environment and Social Risks and Mitigation

This section describes in general terms the potential environmental and social risks and impacts of the project. The detailed technical risks and associated mitigation measures are also considered in the checklist that was developed under the parent project which will be updated, as needed, to take into consideration any new type of equipment and specific standards related to the equipment.

The main social risk is the challenge to ensure that beneficiary facilities are selected according to the population and poverty levels in facility catchment areas as well as the population needs for COVID-19 services, ensuring equity, equipment are distributed to the selected beneficiary facilities and equipment are used for their intended purposes. The risk will be mitigated by including WCO technical assistance in its scope of work to help the GoIRI select health facilities using the facility eligibility criteria. No security personnel were involved in the parent project and this approach will continue in the additional financing.

The following list indicates other possible risk and their mitigation measures:

- Late finalization of recipient facilities
- Inadequate resources and processes for standard practices in HCFs (e.g., waste management)
- Inadequate documentation and classification of workforce and lack of proper monitoring procedures
- Physical, electrical, and radioactive hazards during installation, training, and operation.
- Infections spread risks
- Safety of transportation in terms of vehicle safety and drivers' qualifications
- Inadequate or absence of a simple, accurate, accessible, and culturally appropriate stakeholder engagement including Gender Based Violence (GBV) and Sexual Exploitation Abuse (SEA) and Sexual Harassment (SH) in workplace and for public

Mitigation measures:

- Follow up and constant monitoring for achieving the desired outcomes
- Informing MOHME to take necessary actions to provide financial and non-financial resources to HCFs
- Legitimate contracts with the employees based on the country labor law with insurance
- Emergency response plans
- Suppliers to have a program for vehicles maintenance, checking licensing and training of drivers and putting in place a management plan to prevent drivers' fatigue
- MOHME facilitate to receive all the related permissions from related department
- Combating misinformation with proper grievance redress mechanism
- Outreach/communication tools to make potential beneficiaries aware of the eligibility criteria, principles and methods used for targeting
- Measures to prevent and mitigate the SEA/SH risks to ensure the avoidance of any form of SEA/SH of patients and community members at large will be ensured by adopting national code of conduct for workers, sensitization of project workers on code of conduct, and a grievance redress mechanism to enable reporting of incidents, if any. In case of any incident, action will be taken as per the national code of conduct and regulations.

Table 4: Environmental and Social Risks and Mitigation Measures

Key Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures[2]	Responsibilities	Timeline
Identify the type, location and scale of healthcare facilities (HCF)	Late finalization of recipient facilities	➢ Follow up and constant monitoring	MOHME WCO	Throughout the project
Identify onsite waste management facilities	Inadequate resources and processes for waste management	➢ Informing MOHME to necessary actions to provide financial and non-financial resources to HCF ➢ 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 ➢ Design training for staff in the segregation of wastes at the time of use	MOHME WCO	Throughout the project
Identify needs for workforce and type of project workers	Inadequate documentation and classification of workforce and lack of proper monitoring procedures	➢ Identify numbers and types of workers ➢ Consider accommodation and measures to minimize cross infection ➢ Use the COVID-19 LMP section of this document to identify possible mitigation measures ➢ Monitoring procedures for workforce management	WCO MOHME	Throughout the project
General HCF operation – OHS issues	During installation, training and operation: - Physical hazards; - Electrical - Fire; - Ergonomic hazard; - Radioactive hazard	➢ Work permit licensed by atomic energy organization (for radiation emission equipment) ➢ Regular radiation dosimetry by an authorized company (for radiation emission equipment) ➢ Standard electrical cabling ➢ Firefighting system with extinguisher, detector and alarms ➢ Ergonomic considerations and posture assessment for operators and implementing corrective actions accordingly ➢ Appropriate ventilation	MOHME	Throughout the project

[2] The parent project assessment tool includes detailed protocols for the mitigation measures to address E&S risks (Annex 2) and not included in this table.

Key Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures[2]	Responsibilities	Timeline
Transportation of equipment	safety of transportation in terms of vehicle safety and drivers' qualifications	➢ Suppliers to have a program for vehicles maintenance, checking licensing and training of drivers and putting in place a management plan to prevent drivers' fatigue ➢ WCO to include the measures in the tender document and suppliers to implement the measures	WCO Suppliers	Throughout the project
HCF operation – Labor issue	Incidents	➢ Legitimate contracts with the employees based on the country labor law with insurance ➢ Preparing incidents reports and follow up actions to prevent further incidents.	MOHME	Throughout the project
Emergency events	- Spillage; - Occupational exposure to infectious disease; - Exposure to radiation; - Accidental releases of infectious or hazardous substances to the environment; - Medical equipment failure; - Failure of solid waste and wastewater treatment facilities - Fire; Other emergent events	➢ Emergency Response Plan	MOHME	Throughout the project
Stakeholder engagement – considerations for simple, accurate, accessible, and culturally appropriate information dissemination; combating misinformation; responding to grievances	- Government security department is not always willing to share information and document with WCO and WB. - In communication plan, the transparency and visibility policy might not be clearly spelled out.	➢ MOHME facilitate to receive all the related permissions from security department, before starting the project ➢ Senior level engagement by WCO with those departments ➢ Holding sessions between three main parties to clarify the transparency and visibility policy embedded in communication/visibility plan ➢ Discuss the feasible ways to maximize efficient communication with facilities	MOHME WCO	Throughout the project

Key Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures[2]	Responsibilities	Timeline
	- Direct communication with end user health facilities is challenging - Cultural challenges among end users for sharing their grievances	➢ Have a contract with a focal point based in MOHME to follow up with random facilities in daily basis to receive their feedbacks and grievances ➢ Maximize publicizing and awareness raising on available tools for feedback gathering ➢ MOHME send a letter of clarification to all facilities and ensure that any feedbacks and grievances would be welcome and totally confidential ➢ Use WCO social media platforms		
	- Targeting of beneficiaries is not done in a fair, equitable and inclusive manner resulting in exclusion of some vulnerable groups	➢ Outreach/communication tools to make potential beneficiaries aware of the eligibility criteria, principles and methods used for targeting ➢ Ensure project includes a functional Grievance Mechanism	MOHME WCO	Throughout the project
	- GBV and SEA/SH in workplace and for public	➢ Measures to prevent and mitigate the SEA/SH risks to ensure the avoidance of any form of SEA/SH of patients and community members at large will be ensured by adopting national code of conduct for workers, sensitization of project workers on code of conduct, and a grievance redress mechanism to enable reporting of incidents, if any. In case of any incident, action will be taken as per the national code of conduct and regulations.	MOHME WCO	Throughout the project

Procedures to Address Environmental and Social Issues and Considerations

In the parent project, WCO has implemented the assessment and safeguarding of environmental, occupational health and patient safety standards of the installation and operation of specific medical equipment and laboratory reagents procured through the ICERP.

Therefore, the assessment was not and will not be a general assessment of these standards regarding the whole hospital or laboratory operations. The assessments were conducted only to assess the readiness of the selected hospitals and laboratories on the above standards regarding distributed equipment by the ICERP. Building on this, the additional financing (AF) of the parent project will include the same E&S assessment procedure with some possible modifications relevant to types of equipment and requirements of AF. For more details, please refer to Annex 2.

The summary of the activities is provided below:

- Conducting initial assessment and gradings for each healthcare facility in the project
- Report green graded facilities as eligible to receive the designated equipment
- Report non-green facilities with recommendations to the MOHME to fulfill the non-conformities and conducting follow up assessment
- For possible minor civil works, OHS measures and waste management will be included in the contractors 'contract (refer to annex 4)
- Road safety considerations will be included in the supplier's contracts (Valid licenses of the drivers, vehicle safety and periodic maintenance and driving hours for avoiding fatigue and accidents according to national laws and standards)

In the parent project, identified non-conformities from conducting initial on-site assessments were resolved with the recommended improvement actions. The corrective actions were implemented by MOHME, and the non-green facility and a follow-up assessment (on-site or remote) were conducted by the recruited assessment company. Table 5 represents the categories of issues that were addressed from the facility to be eligible to receive the equipment:

Annex 5 and 6 of this ESMF extensively represent the implemented activities and developed products of E&S assessment in the parent project and accomplished milestones in the project timeline.

Efficient and adequate level of supervision of the activities implemented under this project will be performed in coordination and close collaboration of MOHME.

Table 5: Categories and frequency of the identified and resolved E&S non-conformities in the parent project

The most frequent topics of non-conformities	Frequency indicator	Question clusters in the assessment tool						
		Building	Radiology protection	Staff health	Safety in the workplace	Waste management	Supervisory mechanism	Patient safety
	High	CT scanner dossier profile	Radiologist health protection case	Staff medical records	Firefighting approval and periodic visits of alarms	Connection of center's swage to municipal swage	Medical / lab device calibration	Qualified clinical staff to work with equipment
		Suitable sound and light for workstation	Radiation legal licenses	Occupational health training	Technical inspection of equipment	Proper disinfection of waste	GRM system	Alerting communication lines
	Low	Suitable ventilation hoods in labs	Quality control certificate for radiation devices	Needle stick prevention training	Emergency / warning signs	Suitable autoclave	Preventive maintenance plan	Regular walk rounds

Consultation and Disclosure

The Environmental and Social Management Framework (ESMF), Environmental and Social Commitment Plan (ESCP), and Stakeholder Engagement Plan (SEP) will be disclosed to the public before the appraisal date. Please refer to the SEP for stakeholder engagement and consultation procedures.

Labor Management Procedure (LMP)

These Labor Management Procedures (LMP) are applicable to the Additional Financing of Iran COVID-19 Emergency Response Project (ICERP). The procedures to set out the principal approach to manage project workers in accordance with the national law requirements and the World Bank's Environmental and Social Standard 2 on Labor and Working Conditions (ESS2) are outlined below.

The purpose of these LMPs is to identify the main labor requirements and risks associated with the project, including maintaining a safe working environment for workers throughout the COVID-19 pandemic.

Type of project workers

a) Direct workers

The PIU workers will be professional national and international persons, who will be working in a mixed gender environment, and none would be under the age of 18. Based on the experience of the parent project, approximately between 30 to 50 individuals will be engaged directly. The PIU will be established inside WCO and the main responsibilities of the unit would be coordination with stakeholders, procurement of goods, monitoring and evaluation,

and reporting under the supervision of a director. In addition to that, the WCO technical units will assist the PIU by managing the ICERP pillars including AF. These workers will be governed by the WHO Labor Regulations and the WHO Code of Ethics and Professional conduct for all workers, which include measures to mitigate SEA/SH and GBV.

b) Contracted workers

The number of contracted workers was not recorded in the parent project. However, the number of contracted suppliers during the parent project was 9. For the AF, the PIU will monitor them during the implementation.

These include those contracted workers who would be providing services such as delivering and installation of medical equipment and undertaking minor civil works workers. It is important to note that contracted workers delivering and installing equipment will be local agents of the contracted suppliers, and the supplier contracts will clearly outline adherence to labor legislations and requirements as outlined in the section below. Further, workers who will be engaged for undertaking minor civil works at health facilities to support installation of the equipment will be hired by MOHME in adherence to the country's labor legislations. The project will also involve third party monitoring and verification workers.

The implementation of the project may require hiring consultants to carry out specific task which will be determined upon more decisions is managerial level is finalized. It is noteworthy to mention that any recruited consultant would be a national professional with a fixed term of short-term contract with WHO and governed by WHO labor regulations and the WHO Code of Ethics and Professional conduct for all workers, which include measures to mitigate SEA/SH and GBV.

Timing of Labor Requirements

All project workers (full-time and part-time) will be engaged throughout the project lifetime. Some contracts might be signed based on the implementation stage of the project.

Worker Grievance mechanism

All categories of workers in the project will have easy access to raise any grievances and issues related to the work conditions. In this regard grievance redress mechanism will be established for receiving, recording, forwarding the complaints to the project and provide the complainant with the resolution taken ensuring of which will be through contractual agreements. The worker GM will allow anonymous grievances to be raised and addressed and also address grievances related to SEA/SH and GBV incidents.

The workers grievance mechanism will include:

- a procedure to receive grievances such as comment/complaint form, suggestion boxes, email, a telephone hotline;
- stipulated timeframes to respond to grievances;
- a register to record and track the timely resolution of grievances;
- a responsible department to receive, record and track resolution of grievances.

The mechanism for workers' GRM will be based on the following principles:

Handling of grievances will be objective, prompt, and responsive to the needs and concerns of the aggrieved workers.

- The process will be transparent and allow workers to express their concerns and file grievances.
- There will be no discrimination against those who express grievances.
- All grievances will be treated confidentially, and individuals who submit their comments or grievances may request that their name be kept confidential.
- Anonymous grievances will be considered, and anonymous grievances will be treated equally as other grievances, whose origin is known.
- The complaints related to SEA/SA should follow the principle of "confidentiality", "survivor centricity" and "survivor safety". More specifically, grievances related to SEA/SH will be dealt in the following manner: i) Allow safe and confidential reporting: survivors should be able to report SEA/SH without being identified publicly; ii) Protect information about an SEA/SH allegation, and in particular the identity of the survivor and those involved, at all times; iii) Log SEA/SH cases separately from other cases and should not include identifiable information in a logbook. A separate coding system for names should be created and stored in a locked cabinet. The complaint logbook should also be stored in a different locked cabinet; iv) Support the creation of a supportive, dignified and protective environment for the SEA/SH survivor, and full respect of his/her rights, wishes and choices; v) Be based on the survivor's informed consent, which needs to be guaranteed throughout the GM; vi) Maintain confidentiality and anonymity as a fundamental way to guarantee survivors' safety: survivor files should not be discussed with anyone; vii) Provide feedback on the case to the survivor only and exercise strong caution before communicating any results beyond the survivor.

Assessment of key potential labor risk

All workers are affected by the general terms and conditions of employment (e.g., hours of work, overtime, benefits remuneration, termination of employment; disciplinary measures and grievance procedures). Contracted construction workers involved in minor civil works, particularly temporary or casual. These workers are also exposed to Occupational Health and

Safety risks, although the nature and scale of the works is minimal, and accordingly the OHS risks are considered low to moderate. Primary suppliers that have the reputation of child labor and forced labor will be excluded from the tendering procedure.

The key labor risks are as follows:

- Discrimination in relation to recruitment, hiring, compensation, working conditions, terms of employment, etc.
- Difficulties to supervise the project as intercity movements are prohibited due to COVID-19 situation.
- Social tensions due to concerns about infection spread to the communities in the vicinity of the HCFs, quarantine centers, etc.
- OHS risks during possible minor activities work such as work at height, electrocution use of heavy machines etc.
- Grievance about difficult/unreasonable working conditions (such as forced overtime, non-payment of overtime, stigmatization, depression), child labor and SEA/SH risks

Mitigation measures:

- Discuss the feasible ways to maximize efficient labor management
- Issuing required insurance contracts
- OHS framework and plan available at the facility level
- Access to worker grievance mechanism, as above
- Application of national law in relation to minimum age, labor and working conditions and workplace conduct.
- Sensitization of all project workers on code of conduct and signing code of conduct for contracted workers to mitigate risk of SEA/SH. Direct workers, that is WHO staff and consultants, will be governed the WHO Code of Ethics and Professional conduct for all workers, which include measures to mitigate SEA/SH and GBV.
- COVID-19 risks and considerations: Project workers may be exposed to high-risk environments including laboratories, hospitals, and health care centers. where project workers may be exposed to the virus. Related risks are listed as follows:
- Health and safety risks for frontline service providers, especially against COVID contamination.
- Risks of exposure while handling of medical specimens or treatment of COVID-19 patients
- Untenable overtime, psychological distress, among health care workers.
- Passing on infections to close community and family members and developing stigma.
- Fatigue and occupational burnout leading to physical and psychological ailment.

Mitigation measures:

- Raising awareness of staff using all the available tools such as WCO social medias
- Proper OHS trainings for healthcare workers, if needed
- Availability of proper natural and general ventilation
- Documentation of lessons learned

- Providing appropriate personal protective equipment (PPE)
- Appropriate working hours (shift) with suitable SOPs in place

The questionnaire developed in the parent project include all the required measures for OHS risk management (Annex 2).

LABOR LEGISLATION: TERMS AND CONDITIONS

All employers, employees, factories, industries, service providers and agricultural facilities are required to obey the labor law. Forcing people to work and exploiting others is forbidden, and the people of Iran, regardless of their ethnicity or tribe, color, race, language, have equal rights and no one will have any sort of privilege, and all people, men and women are considered alike and protected by the law.

To do equal work that is done in equal conditions in a workplace, equal payments must be paid to men and women. Discrimination in determining wages by age, gender, race, ethnicity, and political and religious beliefs are prohibited.

The workers' annual paid leave, using wages and with consideration of four Fridays, is a total of one month. Other holidays will not be considered as holidays. For work of less than one year, the leave is calculated in proportion to the length of work being done.

Employment of persons under 15 years of age is strictly prohibited. A worker between the ages of 15 and 18 must undergo a medical examination by the Social Security Administration at the time of employment. The daily working hours of this type of worker are half an hour less than the normal working hours of workers.

In occupations that are detrimental to the health or morals of trainees and adolescents due to their nature or the conditions in which the work is performed, the minimum working age will be 18 years. The enforcement mechanism of implementing this law is with the Ministry of Labor and Social Affairs.

The employment contract, in addition to the exact details of the parties, must contain the following:

- The type of work or profession or task that the worker must engage in
- The base salary or wages and its entitlements
- Working hours, holidays, and vacations
- Place of work
- Date of concluding the contract
- The duration of the contract if the work is for a certain period
- Other cases that are required by the custom and habit of the job or place.

Age of employment and forced labor

No children under the age of 18 will be employed on any aspect of the Project. The use of forced labor to carry out any activities is also prohibited. Contractors and suppliers will be required to verify and identify the age of all workers. This will require workers to provide official documentation, which could include a birth certificate, national identification card, passport, or medical or school record. If a minor under the minimum labor eligible age is discovered working on the project, measures will be taken to immediately terminate the employment or engagement of the minor in a responsible manner, taking into account the best interest of the minor.

Any type of contract in this project that includes workers will have considerations toward all the labor-related laws and regulations.

For COVID-19 considerations, guideline developed by MOHME titled "Guidelines for the prevention of Corona disease and other acute respiratory infections in the workplace during an epidemic" ensures preventing infection at any type of workplace and working arrangement.

LABOR LEGISLATION: Occupational Health and Safety

Chapter 4 of Iran labor law titled Technical Protection and Occupational Health (approve 20 November 1990), contains 22 articles and 22 notes which clearly states that in order to prevent occupational-induced diseases, providing a healthy workplace and workforce and technical protection, all instructions made by Technical Protection Council and Ministry of Health and Medical Education for workshops, factories, employers, employees, and interns are mandatory to follow.

Ministry of Cooperatives Labor and Social Welfare and Ministry of Health and Medical Education inspectors have full authorities to inspect and audit any institution included in this article day or night without prior announcement. These inspectors report is considered as a judicial official report. If the inspectors found any institute/facility with probability of accident occurring, immediate report has to be filed to inform their supervisor and employer for further actions (e.g., seal and locking the workshop by the court).

- Any license for construction or development of a workshop/place is subjected to the confirmation by Ministry of Cooperatives Labor and Social Welfare.
- Documentation of employees' medical records and annual examinations/tests (through valid medical centers) by employer is mandatory.
- In case of any accident due to neglecting occupational health and safety instructions by the employer, employer is legally responsible for the accident.
- Employer must teach and monitor workers to use personal protective equipment.
- Technical Protection and Occupational Health committee meetings.
- Ministry of Health and Medical Education is responsible for planning, controlling, evaluating, and inspecting occupational health and workers' treatment.

The main body for enforcement of law is Judiciary power and the ministry of justice. Individual/Organization enforcer

- Technical Protection Council (Ministry of cooperatives labor and social welfare)
- Ministry of Health and Medical Education

RESPONSIBLE STAFF

Responsible staff for this AF, although not yet finalized, it will include but not limited to social/environmental specialist, project coordinator, monitoring and evaluation specialist, procurements specialist and contractor which will perform project activities in collaboration with WCO and MOHME (including benefited healthcare facilities). The tentative responsibilities of these staff within WCO and MOHME are as the following:

Table 6: Labor management activities and responsible staff

Activities	Responsible staff
Engagement and management of direct project workers	Social/environmental specialist
Engagement and management of contracted workers	Project coordinators and contractors
Monitoring of Occupational Health and Safety (OHS) of health care workers (HCFs and laboratories)	Social / Environment Specialist, Project Coordinator, TPVA
Conduct OHS training for workers, if needed	Social / Environment Specialist, Contractors
Sensitization of workers on code of conduct for project workers to mitigate risk of SEA/SH	Social / Environment Specialist, Contractors, and project coordinators
Addressing worker grievances	Social / Environment Specialist, contractors, Project coordinators

Contractor Management

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

- Monitor, keep records and report on terms and conditions related to labor management, including specific aspects relating to COVID-19;
- Provide workers with evidence of all payments made, including benefits and any valid deductions;
- Ensuring there is a health and safety focal point, responsible for monitoring OHS issues and COVID- 19 prevention and any cases of the virus;
- Keep records regarding labor conditions and workers engaged under the Project, including: contracts, registry of induction of workers including Code of Conduct, hours worked, remuneration and deductions (including overtime);
- Record safety incidents and corresponding Root Cause Analysis;

- Report evidence that no child labor is involved;
- Training/induction dates, number of trainees, and topics;
- Insurance for workers against occupational hazards and COVID-19, including ability to access
- medical care and take paid leave if they need to self-isolate as a result of contracting COVID-19.
- Details of any worker grievances including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken. Grievances listed should include those received since the preceding report and those that were unresolved at the time of that report; and
- Sign the Manager's Code of Conduct and/or the Individual Code of Conduct, as applicable.
- PIU shall incorporate the agreed labor management requirements into contractual agreements with the contractor together with appropriate non-compliance remedies in case of non-compliance with relevant environmental, social, health and safety requirements and monitor the performance management of the contractors. Also, the contractors shall report any incidence to PIU and incidence shall be included in the progress reports as an annex.

Stakeholder Engagement

Stakeholder engagement is extensively provided in the SEP document of the project.

Project Implementation Arrangements, Responsibilities

As documented in the Environmental and Social Commitment Plan (ESCP), the WCO will establish and maintain a Project Implementation Unit (PIU) with qualified staff and resources to support project management and address risks and impacts in the same manner as the parent project. An E&S assessment company will be contracted through WHO standard tendering process to implement the assessment similar to the parent project. The assessment company will conduct the E&S readiness assessment in the selected facilities based on the type of designated equipment and reports the status to PIU. In a joint meeting, the facilities will be graded based on the filled checklist and responses to the relevant questions. Fully compliant HCF will receive the equipment and others with identified non-conformities will be reported to MOHME with recommendation to improve the readiness status of the site. Implementing corrective actions and resolving E&S issues is the responsibility of MOHME and HCFs. Follow up assessment will be conducted for the non-compliant HCF for re-assessment and follow up grading.

E&S specialist(s) will be hired by WCO and will join the PIU. Such specialist(s) will prepare and submit to the World Bank regular reports on the environmental and social component of the project. PIU will be in close coordination and collaboration with all stakeholders and involved parties to execute activities in a proper manner to fulfill project milestones as such accomplishments has achieved in the parent project.

For verifying the implemented activities in the parent project, a third-party verification agency was recruited to verify eligible goods procured, stock balances by storage locations, and distribution of eligible goods to beneficiary facilities. Post-delivery visits to all beneficiary facilities to verify that the equipment is installed and used for patients will be conducted in the same approach as the parent project. TPVA will also verify the procedure of Environmental and Social assessment. Resolving any identified issues such as non-conformities in the verification visits of HCFs is the responsibility of MOHME and/or WCO based on the type of issue to take appropriate actions. TPVA will review the implemented corrective action to verify the matter in hand.

Annexes

1. Abbreviations and Acronyms
2. ICERP E&S information package and the assessment tool
3. Environmental and Social Risks and Mitigation Measures
4. Measures for possible minor civil works
5. E&S milestones and progress in the parent project
6. List of activities and products of the E&S assessment in the parent project
7. Resource List: COVID-19 Guidance

Annex 1: Abbreviations and Acronyms

COVID-19	COVID-19 Coronavirus Disease 2019
EHS	Environmental, Health and Safety
EHSGS	World Bank Group Environmental, Health and Safety Guidelines
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESS	Environmental and Social Standards
ESMF	Environmental and Social Management Framework
GBV	Gender Based Violence
GIIP	Good International Industry Practice
GM	Grievance Mechanism
HCF	Healthcare facility
IPC	Infection Prevention and Control
LMP	Labor Management Procedure
MOHME	Ministry of Health and Medical Education
NRSC	National Road Safety Commission
NEMO	National Emergency Medical Organization
OHS	Occupational Health and Safety
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
RMTO	Road Maintenance and Transportation Organization
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
TOR	Terms of Reference
TPVA	Third Party Verification Agency
UN	United Nations
WASH	Water, Sanitization and Hygiene
WB	World Bank
WCO	World Health Organization Country Office
WHO	World Health Organization

Annex 2: ICERP E&S information package and the assessment tool

ICERP
Iran COVID-19 Emergency Response Project

Environmental & Social Workstream

Iran Covid-19 Emergency Response Project (ICERP)

Assessment of environmental and occupational health, patient safety standards related to installation and operation of medical equipment and laboratory reagents to be procured through ICERP

Information package for selected hospitals and laboratories

22/09/2020

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Abbreviations

CT: Computer tomography equipment

CRRT: Continuous renal replacement therapies equipment

ECMO: Extracorporeal membrane oxygenation equipment

ECO SONO: Echocardiography equipment

ICERP: Iran COVID-19 emergency response plan

MOHME: Ministry of Health and Medical Education

WHO: World Health Organization

Information package

Iran Covid-19 Emergency Response Project (ICERP)

1. ICERP background information:

The COVID-19 pandemic is posing a major challenge for health care systems around the world. Upscaling laboratory capacity is needed particularly to enable early interruption of corona virus transmission. Providing high quality hospital diagnostic and curative services including intensive care require specialized equipment to be available in sufficient number.

Contracted by the Ministry of Health and Medical Education (MOHME), the World Health Organization (WHO) is implementing the Iran COVID-19 Emergency Response Project – ICERP. ICERP is committed to 100% delivery for saving lives by serving communities. ICERP will make a major contribution to availability of more advanced equipment in public sector laboratories and hospitals across the country for the control of COVID-19 and the treatment of hospitalized COVID-19 patients.

ICERP will deliver:

Provision of Technical Assistance

- Identification, quantification, specification of life-saving medical equipment urgently needed for COVID-19 patients
- Support MOHME in the selection of priority public hospitals and laboratories as beneficiaries for ICERP

Procurement & Distribution of Medical Equipment

- Procurement of essential hospital and laboratory equipment for COVID-19 diagnosis and treatment
- Delivery to about 150 hospitals and laboratories across the country

Safeguarding environmental, occupational health and patient safety standards related to installation and operation of medical equipment and laboratory reagents to be procured through ICERP

- Assessment of all equipment receiving hospitals and laboratories and follow up during the project period

Transparency: monitoring, reporting and verification.

- Quarterly progress and end of project reports with verification through third party agent

Stakeholder Engagement

- Provision of regular information about ICERP progress and establishment of grievance redress mechanisms

2. Safeguarding environmental, occupational health and patient safety standards

This information package focuses on the assessment and safeguarding of environmental, occupational health and patient safety standards as far as the installation and operation of specific medical equipment and laboratory reagents are concerned that will be procured through ICERP. The assessment is therefore not a general assessment of these standards regarding the whole hospital or laboratory operations. The assessment will be conducted only to assess above standards regarding distributed equipment by ICERP at

the selected hospitals and laboratories. The list of selected hospitals and laboratories and the equipment procured through ICERP that will be delivered to each respective facility has been established by the MOHME in close collaboration with WHO following defined and agreed criteria related to COVID-19 diagnosis and treatment needs with particular focus on the most vulnerable and at risk populations under the pre-condition of full-filling the environmental, occupational health and patient safety standard related to the installation and operation of the procured equipment. The ICERP assessments are being conducted by the WHO country office, on behalf of the Ministry of Health and Medical Education (MOHME) and in collaboration with one of the top technical assessment companies in the health sector, TÜV NORD Iran. Safeguarding of environmental, occupational and patient safety standards at the selected hospitals and laboratories will be conducted throughout the ICERP implementation period (ending 28 February 2021) in 3 phases:

- Preparatory phase (completed): National and international documents specifying the framework and regulations of the environmental, occupational and patient safety standards including WHO guidance and recommendations were collected; an assessment tool specifically related to installation and operation of ICERP procured equipment was developed and finalized through a pilot a three of the selected facilities.
- Facility assessments phase: The focus of this information package; the details are being provided below.
- Facility follow-up and monitoring phase: Following and based on the findings and recommendations of the site-assessment phase, all selected hospitals and laboratories will be provided with follow up monitoring services during the full ICERP implementation period to ensure that the environmental, occupational health and patient safety standards related to the installation and operation of the ICERP procured equipment are sustained. It will be the responsibility of the hospital and laboratory management and the MOHME to address the assessment findings and recommendations.

3. Facility assessment phase

3.1 List of reference documents

The documents listed in table 1 and 2 are being used as national and international references, respectively, for environmental, occupational health and patient safety standards to be assessed in the selected hospitals and laboratories as far as they are related to the installation and operations equipment procured and delivered under ICERP. Hyperlinks are being provided to use the references for preparation by managers and other staff members at the selected hospitals and laboratories.

Table 1- National references for environmental, occupational health and patient safety standards

National References		
No	Reference Title	Code
1	[1996] Paragraph 2 of Article 1 of the Law on the Organizational Structure and Duties of the Ministry of Health and Medical Education	N1
2	[1990] Chapter 4 of the Iran labor law	N2
3	[1997] Article 688 of the Islamic Penal Code	N3
4	[2005] Hospital Establishment and Operation By-law	N4
5	[2006] The Radiation Protection Act	N5
6	[2016] Occupational Exposure Limits (OEL)	N6
7	[1992] Environmental Health By-law	N7
8	[2008] Law on Health Care Waste Management and Rules and Procedures for the Executive Management of Medical Waste and Related Waste	N8
9	[2019] National Accreditation Standards of Iranian Hospitals	N9
10	[2008] Instructions for Safe Power Supply in Medical Centers	N10
11	[2013] Standards for Planning and Design of Safe Hospitals-10th Volume-General Requirements	N11
12	[2013] Patient Safety guidelines	N12
13	[2009] National charter of patient right, national regulations for patient /client right	N13
14	[2002] The plan of honoring people and satisfying clients in the administrative system	N14

Table 2- International references for environmental, occupational health and patient safety standards

International references			
No	Organization	Reference Title	Code
1	World Bank: Environmental and Social Framework	[2016] Assessment and Management of Environmental and Social Risks and Impacts	ESS1
2		[2016] Labor and Working Conditions	ESS2
3		[2016] Resource Efficiency and Pollution Prevention and Management	ESS3
4		[2016] Community Health and Safety	ESS4
5		[2016] Stakeholder Engagement and Information Disclosure	ESS10
6	World Bank	[2007] Environmental, Health, and Safety General Guidelines	EHSG
7	World Health Organization	[2014] Safe management of waste from health-care activities (2nd edition)	WHO1
8		[2016] Patient safety assessment manual (2nd edition)	WHO2
9		[2008] Essential environmental health standards in health-cares	WHO3
10		[2010] WHO Best practices for injections and related procedures toolkit	WHO4
11		[2011] Medical equipment maintenance programme overview	WHO5
12		[1999] Medical device regulations-global overview and guiding principles	WHO6
13	ISO Standards	ISO 13485:2016, Medical devices-Quality management systems- Requirements for regulatory purposes	ISO 13485
14		ISO 22320:2018, Security and resilience – Emergency management – Guidelines for incident management	ISO 22320
15	National Fire Protection Association	[2002] NFPA 70 – National electrical code	NFPA70
16	International Atomic Energy Agency	[2014] International Atomic Energy Agency: Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards	IAEA
17	European Union	[2011] Occupational health and safety risks in the healthcare sector-European Commission	OHS

3.2 Environmental, occupational and patient safety related to selected essential COVID-19 medical equipment and reagents

Table 3a to 3f provides an overview of the key environmental, occupational and patient safety considerations related to some selected essential COVID-19 medical equipment and reagents. Each hospital and laboratory will be informed before the assessment which equipment or reagents it is likely to receive based on the allocation done by the MOHME. Note that allocations can still change at a later stage depending on the current availability on the international markets or changing needs at the time of delivery.

Table 3a- Key environmental, occupational and patient safety considerations related to CT scan, portable radiology, angiography

CT scan, portable radiology, angiography
Environmental Risks
• Poor recycling and disposal standard in place.
Occupational Safety and Health Risks
• Due to the presence of an X-ray generator and tube, ionizing radiation is a major occupational risk. • Ionizing radiation in x-ray machines and the risks of exposure to chemicals used in printing are among the most important occupational health risks of these devices (except for fully automatic devices; so, the project needs to be discussed with the experts of the department of equipment and treatment, the office of imaging). • Exposure with contrast agent and processing solutions in non-digital radiographs increases the occupational health risks. Working in conditions of inadequate lighting and ventilation and natural light are among the problems of working with these devices, as most of them are located underground. • Ergonomic conditions: poor working postures (adjusting posture in a way that hands do not go above the shoulder, the monitor stays in front of the operator and can be adjusted so that the neck does not move up and down too much to operate). • Long work shifts, sometimes up to 24 hours, lead to eye strain due to the operator's long looking, psychological stress due to fear of exposure to ionizing radiation. • There is a risk of electric shock when working with this equipment (in case of lack of earth ground connection, technical problems and non-compliance with the instructions along with the installation of the equipment). • Any contact of the device with metals (gold, piercings attached to the patient, prostheses inside the organs of the body, etc.) is hazardous.
Patient Safety Risks
• Unqualified and unskilled staff and operators. • Insufficient or lack of radiation protection equipment for patients. • Insufficient or lack of disinfection supplies and single used instruments. • Staff fails to explain possible interventional and invasive procedures to the patient or legal representative and signing the consent form.

Table 3b- Key environmental, occupational and patient safety considerations related to CRRT machine

CRRT machine
Environmental Risks
• Incorrect disposal of pharmaceutical and chemical waste
Occupational Safety and Health Risks
• Physical: cutting of the skin with a sharp object, poor lighting, excessive monitor brightness, sound and vibration due to the malfunction of the device, electrical waves • Chemicals: disinfectants such as ammonium chloride and formaldehyde • Biological: blood-borne diseases (AIDS, hepatitis), as well as respiratory and skin diseases (bacteria, viruses, and fungi) • Ergonomic: working for long periods in standing or seated positions, repetitive body movements, lifting, poor posture (control access limits for the user can be considered in ergonomic evaluation). • Risk of electric shock by the device (due to technical defects and lack of connection to the earthing system, as well as technical problems and non-compliance with instructions of the installation of equipment) • Falling and slipping due to trapping with wires.
Patient Safety Risks
• Insufficient or lack of essential, emergency and disinfection equipment and supplies. • Unsafe working with blood and blood products

Table 3c- Key environmental, occupational and patient safety considerations related to ECMO machine

ECMO machine
Environmental Risks
• Poor recycling and disposal standard in place.
Occupational Safety and Health Risks
• Failure to observe the safety of pressurized cylinders that can cause risks such as an explosion. • Falling and slipping due to trapping with wires.
Patient Safety Risks
• Unqualified clinical staff operating the device

Table 3d- Key environmental, occupational and patient safety considerations related to Video Laryngoscope

Video Laryngoscope
Environmental Risks
• Poor safe recycling and disposal of biological waste in place.
Occupational Safety and Health Risks
• Biological: contact with infected secretions of the patient's larynx • Ergonomic: working for long periods in standing or seated positions, rapid and continuous hand movements, poor hand posture
Patient Safety Risks
• Insufficient or lack of disinfection/sterilization supplies and single used instruments. • Unqualified and unskilled clinical staff operating the laryngoscope.

Table 3e- Key environmental, occupational and patient safety considerations related to ECO-SONO device

ECO-SONO device
Environmental Risks
• Poor recycling and disposal standard in place.
Occupational Safety and Health Risks
• Electromagnetic waves are among the most important precautions for working with these devices.
Patient Safety Risks
• Unqualified and unskilled clinical staff operating the device.

Table 3f- Key environmental, occupational and patient safety considerations related to laboratory equipment and reagents

Laboratory equipment and reagents
Environmental Risks
• Poor safe recycling and disposal of biological waste in place.
Occupational Safety and Health Risks
• Biological: blood-borne diseases (AIDS, hepatitis), as well as respiratory and skin diseases (bacteria, viruses, and fungi) • Physical: cutting of the skin with a sharp object, poor lighting • Chemicals: disinfectants such as ammonium chloride and formaldehyde • Ergonomic: working for long periods in standing or seated positions, rapid and continuous hand movements, improper hand posture • Risk of electric shock (due to lack of earth ground connection and technical defects, as well as technical problems and non-compliance with instructions of the installation of equipment) in electrical laboratory equipment.
Patient Safety Risks
• Unsafe working with blood and blood products and neglecting safe pre-transfusion procedure. • Inexistence or shortage of clear communication channels for urgent result announcements. • Insufficient or lack of disinfection supplies and single used instruments. • Infection control plan failure or poor implementation.

3.3 Assessment tool

The assessment tool that will be used is attached to this information package as Annex I. The ICERP assessment tool has been developed by the MOHME and WHO country office based on the reference documents (see section 3.1) in consideration of selected essential equipment and reagents for COVID-19 diagnosis and treatment (see section 3.2), reviewed by national and international experts including TÜV NORD Iran, and finalized after being tested in a pilot with three site assessments (two hospitals and one laboratory).

Before implementation of the joint assessment with WHO, MOHME and TÜV NORD Iran, a self-assessment is recommended using the ICERP assessment tool for all hospitals and laboratories. This could be an opportunity for them to take corrective measures as required.

3.4 Required certificates and other facility documents

Table 4a and b highlights the certificates and other facility documents that should be available at the time of the joint site assessment with the WHO, MOHME and TÜV NORD Iran in order to make the assessment day as time efficient as possible. If the availability of these certificates and documents cannot be proven, it will affect the outcome of the assessment negatively, potentially up to the point that the facility needs to be taken off the list as beneficiary of ICERP as the passing of the environmental, occupational health and patient safety assessment is a requirement for installing or operating equipment or reagents procured under ICERP.

Table 4a - List of required documents during the assessment process of hospitals to be seen by assessor

Row	Document
1	Operating license or principal agreement or approval evidence of the plot and the plan or article 20 commission for equipment
2	Records for measuring illuminance and noise exposure in the working environment (radiology and ICU sections) after 2018
3	Records for consumption analysis and comparison in different months/year or any documentation of effective interventions to optimize energy consumption
4	Radiation license issued by the atomic energy organization for installation and working with existing equipment in radiology department or license to use the space provided for the installation of new equipment from the atomic energy organization or health deputy of the university of medical sciences (only for available radiology, CT scan angiography)
5	Dosimetry records and radiology personnel shifting program including reduction of working time of radiation personnel and radiation vacation (records available in 2020)
6	Medical records of staff related to radiology and ICU, at least one time in the last year should be conducted
7	Disinfection instructions for medical equipment and workplace
8	Records and minutes of infection control and environmental health committee (of PPE needs for each job), mortality committee, crisis management, accident records and infection control
9	Training records of personnel regarding infection control, needle stick, personal protection, safety of working with dangerous equipment, patient safety, specialized training in working with ECMO and CRRT for ICU nurses
10	Records of inspections performed or PM for medical equipment and building facilities considering the electrical safety requirements of the equipment
11	Approval of firefighting standards from the regional firefighting department or the existence of process and equipment fire alarm and extinguishing
12	Records for separation program and waste coding documentation and waste statistics records for at least two years
13	Outsourcing contract for waste treatment or waste autoclave PM records and result of chemical or biological tests
14	License of water and wastewater organization or local environmental authority for swage of hospital or disinfection records or contract with related authority

15	Full detailed list of employment and or contract with personnel of occupational health/environment expert and medical equipment expert
16	PM plan of medical equipment and their calibration certificates
17	Documentation of policy, planning, action plan and training courses regarding patient safety and Records of scheduled walk round of senior management and risk identification
18	Records of microbial culture tests of functional CSR and the sterile related packs
19	Records of completed consent forms for possible interventional and invasive procedures
20	Records of safety of blood and blood products

Table 4b - List of required documents during the assessment process of laboratories to be seen by assessor

Row	Document
1	Operating license, approval evidence of the plot and the plan, article 20 commission in case of lack of the license or permission of the health deputy or laboratory director to establish a laboratory
2	Records for measuring illuminance and noise exposure in the working environment
3	Records for consumption analysis and comparison in different months/year
4	Medical records of all staff
5	Disinfection instructions for medical equipment and workplace
6	Readiness and availability of Infection control records (culture result of sites and autoclave)/washing and disinfection program
7	Training records of personnel regarding infection control, needle stick, personal protection, safety of working with dangerous equipment, patient safety, specialized training
8	PM plan of medical equipment and their calibration certificates
9	Records of temperature control of refrigerator
10	Existence of UPS or necessary arrangements for power outage like power trans
11	Approval of firefighting standards from the regional firefighting department or the existence of process and equipment for fire alarm and extinguishing
12	Records for separation program and waste coding documentation
13	Outsourcing contract for waste treatment or waste autoclave PM records and result of chemical or biological tests
14	License of water and wastewater organization or local environmental authority and records for disinfection

3.5 Assessment process

The facility assessment process consists of the following steps:

- Assessment preparation
- On-site assessment
- Assessment analysis, grading and reporting

3.5.1 Assessment preparation

The MOHME will assign focal points at each university of medical sciences as contact points for WHO. Through these contact points, focal points at each of the selected hospitals and laboratories will be assigned to WHO and the assessment team of TÜV NORD Iran.

The focal points will receive the assessment information package to prepare themselves and to conduct a self-assessment prior to the assessment day. In addition, a virtual briefing session will be organized with the focal points and a video clip with all essential information will be provided.

Through the WHO focal point in the country office, the assessment date and time agreed with the MOHME will be communicated with TÜV NORD Iran.

Following that, the assessment team of TÜV NORD Iran will be in direct contact with the focal point of each facility to be assessed through the respective university focal point to communicate the detailed arrangements for the assessment day, including the introduction, registration and clearance of the assessment team members, the hospital or laboratory staff that needs to be available for the assessment day on-site and any other matter related to effective preparation of the assessment day.

3.5.2 On-site Assessment

The on-site assessment of each selected hospital or laboratory will be conducted by TÜV NORD Iran using a standard procedure and the assessment tool (Annex I). Besides assessing the location and the location-specific conditions and to discuss various aspects with the responsible person designated by the facility in order to determine the readiness for installing of medical equipment procured under ICERP and allocated to the specific site, certificates and other documents listed in section 3.4 need to be provided and reviewed. Together with authorized facility staff, the assessment tool will be completed using electronic data collection and processing tools provided by TÜV NORD Iran. To point out again: The environmental, occupational health and patient safety standards will be assessed only to the extent that they are relevant for the installation and operation of the medical equipment procured and delivered by ICERP to the respective site.

3.5.3 Assessment analysis, grading, and reporting

The assessment reports will be prepared and delivered to WHO by TÜV NORD Iran including suggested timeframes for the completion and performing of recommended corrective actions based on the gap analysis. Reports are not certificates or accreditation documents, but purely used to document the readiness or not of the assessed facility to receive essential medical equipment or laboratory reagents through ICERP as allocated by the MOHME. Based on the assessment finding, each site will be graded in one of the following 4 categories:

Compliant-Green Flag

The facility is fully in conformance with the criteria mentioned in the assessment tool and the medical equipment procured by ICERP allocated by MOHME to the facility can be installed/used without any reservation.

Tolerable – Yellow Flag

There are some deviations which do not limit the capability of the facility to safeguard the environmental, occupational health and patient safety standards and the medical equipment procured by ICERP and allocated by MOHME to the facility can be installed/used with tolerating the existing deviations.

Conditional – Brown Flag

Generic Brown flagging

There are some non-conformities which limit the capability and ability of the H/L to achieve the intended results and equipment could NOT be installed / used without needed corrective actions in proper timeline aligned with ICERP project life cycle. Brown flag H/Ls compliancy will be assessed remotely or on-site.

CT Machine or Angiographic X-ray Brown flagging

If a hospital receives a CT Machine or Angiographic X-ray, the hospital will be flagged Brown, regardless if the readiness in term of the E&S project scope for obtaining of other medical equipment is given. The CT Machine or Angiographic X-ray could NOT be installed unless the Hospital fulfils the requirements of related MOHME Dossier and a building space is determined for installation of CT Machine or Angiographic X-ray. All required actions have to be performed in proper timeline aligned with ICERP life cycle.

Reject – Red Flag

The facility is not conforming to the criteria of the assessment tool and there is considerable doubt that efficient corrective actions could be realized and implemented in proper timeline aligned with project life cycle. In consultation with the MOHME, such a facility would be removed and replaced with another hospital or laboratory, as applicable.

The grading mechanism includes two phases as follows:

- Grading by TÜV NORD Iran and WHO technical team

  All completed checklists will be regularly reviewed based on assessment results and remarks of assessors. All nonconformities will be screened and discussed. The main approach for grading those centers which are not fully compliant (100 % yes responses and flagged **green**) will be based on the criticality of the nonconformities and time needed for elimination of cause and improving the situation.
  If the nonconformities are mainly non-critical items and could be solved within project tolerable time frame and submission of documents and evidence will be sufficient for approval, then the center will be marked as **yellow**. Recommendations with a deadline for accomplishment of improvements and submitting documents will be provided. All yellow flagged centres will be followed up remotely until fulfilling their requirements in assessment.
  The last type of grading is brown flag. Those sites which showed several nonconformities, with dominance of critical items and expected time for eliminating cause and improvement approaching the maximum tolerable time frame of the project, will be flagged as **brown**. The brown flagged centres are candidate for a combination of remote follow up and on-site assessment. Then some of these centers will be selected for on-site re-assessment and remaining will be closely followed up till fulfilment of the requirements and submitting documents. If degree of deviation and nature of items are not in a situation to be improved within project tolerable time frame, then the center will be marked as **red**.

- Confirmation of the grading in joint meeting between MOHME and WHO

  Draft grading report will be presented to MOHME and after final review between MOHME and WHO, grading and timelines for follow up will be agreed and confirmed. Then MOHME will be responsible to develop an improvement plan, implement and report all expected results and submit all required documents.

4. Facility follow-up and monitoring phase

This phase will take into account the findings, recommendations and grading of the on-site assessment report. While newly selected facilities replacing red flag sites will start again with the phase 2 (on-site assessment) process, follow up priority will be given to sites graded with a brown flag in order to assist them through the MOHME, the respective university of medical science in charge and in close collaboration with the facility management to address the identified gaps to achieve a yellow or even green flag status within the timeframe indicated and agreed on in the assessment report. If at least a yellow flag status cannot be achieved, the facility will be removed from the selected list and a replacement facility selected in consultation with the MOHME.

In addition, yellow flag sites will be followed up before the delivery of the allocated equipment to review progress made related to the recommendations provided in the assessment report.

Eventually, all green and yellow flag sites including those with an initial brown flag in the on-site assessment will be followed up once the allocated equipment or reagents have been delivered and are in use.

Follow up will be conducted remotely in close coordination with and under guidance of the MOHME using well established infrastructure and procedures of TÜV NORD Iran including tele- and video conferencing and visual documentation. Particularly during the time of the COVID-19 epidemic, remote assessments even for certification and accreditation processes are well established and officially recognized, and fully established as standard for TÜV NORD Iran operations.

In addition, physical re-assessments will be conducted particular at facilities with an initial brown flag and with a random selection of green and yellow flag sites proportional to their initial grading status.

All follow up assessments, remote and on-site – will be conducted by TÜV NORD Iran in coordination with the WHO country office focal point and MOHME confirmation. Regular reports will be reviewed by WHO and shared with the relevant authorities at the respective university of medical science and the MOHME.

ICERP
Iran COVID-19 Emergency Response Project
Environmental & Social Workstream

ICERP assessment tool of environmental and occupational health, patient safety standards related to installation and operation of medical equipment and laboratory reagents to be procured through the COVID-19 Emergency Response Project (ICERP)

Produced by: WHO, MOHME and TÜV NORD Iran

Approved by: WHO country office –Iran

Document No.:

Edition: 11 August 2020

1- Building

No	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
1	Has H/L [3] received the permission of the relevant commissions? Or the plot and construction plan of the department/institution approved by the health authorities?	Critical[4]			Operating license or principal agreement or approval evidence of the plot and the plan and or article 20 commission in case of absence of the license for equipment or permission of the health deputy to establish a laboratory	Technical supervisor /internal manager	Hospital Establishment and Operation By-law/ Ministry of Health and Medical Education/ March 2005	General (IM, CL, Lab)[5]
2	Are the workplace and related rooms in a healthy condition?	Non-Critical			Is the roof of all wards intact, without seams or cracks? Is the roof of all wards painted with oil or plastic paint? Are the floors of all the rooms and corridors, and the warehouses intact, without seams or cracks? Are the floors of all the rooms and corridors, and the warehouses washable? Are the toilet and the bathroom separate from the floor to the ceiling using washable and not damaged /cracked stone, ceramic or tile, as well as bright and clean color?	Technical supervisor /internal manager	Hospital establishment and operation by-law/ ministry of health and medical education/ March 2005	General (IM, CL, Lab)
3	Is there an efficient natural, general, and local ventilation system?	Non-Critical			Is there a checklist for periodical control of facility components? Is the ventilation system such that indoor air is always fresh, sufficient, odorless, and healthy?	Technical supervisor /internal manager	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)

[3] Hospital/Laboratory
[4] "Critical" status in all parts of these requirements means that if the question is not approved by the supervisor, the pertinent center will be excluded.
[5] **IM**: Imaging equipment including CT scan, angiography, portable digital radiography and echosonograrhy
CL: Clinical equipment including ECMO, CRRT and video laryngoscope
Lab: Laboratory equipment including PCR and kits, RNA extraction kits, automated robotic liquid handling machine and automated robotic nucleic acid extraction machine

No	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
4	Is there a suitable class ventilation hood according to the type of device and biological agent?	Non-Critical			Laminar microbiologic hood Procurement documents or periodical inspection Is the hood class suitable for the type of pollution?	Technical supervisor /internal manager	National accreditation standards of Iranian hospitals/ 4th edition / 2019	Lab
5	Is the lighting and sound suitable for all workstations?	Non-Critical			Is the illuminance sufficient in accordance with the occupational exposure limits (OEL)? Are lighting systems cleaned in the wards? Have the burned bulbs been replaced? Is the noise exposure in the working environment in accordance with the occupational exposure limits (OEL)?	Technical supervisor /internal manager	Occupational exposure limits / MOHME / 4th edition / 2016	General (IM, CL, Lab)
6	Is there a plan to reduce energy consumption?	Non-Critical			Consumption analysis in different months/years	Technical supervisor /internal manager	Section 19 of building national rules	General (IM, CL, Lab)
7	Did the hospital expecting CT scan determine the building space for the CT machine and is the MOHME approved dossier for establishment and installation of CT scan in place?	Critical			Existence of actual room/building specified for CT scan and existence of approved full dossier for establishment and installation of CT scan	Technical supervisor /internal manager	Assessor's observation	IM (Only CT)

2- Radiation protection (CT scan, angiography, radiology)

No.	Title	Status	Response		Evidence and Observation	Interviewee	National Reference	Medical Equipment
			Yes	No				
1	Do ionizing radiation generators have the necessary legal licenses?	Critical			Radiation license issued by the atomic energy organization in accordance with article 4 of the executive by-law of the radiation protection act	Radiology technical supervisor	The radiation protection act / approved by the council of ministers / Oct 2006	IM
2	Are all radiologists equipped and monitored by a reliable personal dosimeter?	Critical			Check for the installed personal dosimeters Use of a dosimeter in accordance with clause 1 of article 18 of the executive by-law of the radiation protection act	Radiology technical supervisor	The radiation protection act / approved by the council of ministers / Oct 2006	IM
3	Is there an individual protection case, including dosimetry results, periodic examinations, and staff tests?	Critical			See contract with a subcontractor or records of dosimetry Medical records, dosimetry, specific tests in accordance with article 15 of the executive by-law of the radiation protection act	Radiology technical supervisor	The radiation protection act / approved by the council of ministers / Oct 2006 ISO 13688:2013, protective clothing – general requirements	IM
4	Do radiation generators have a valid annual quality control certificate?	Critical			Certificate of quality control issued by the atomic energy organization	Radiology technical supervisor	national accreditation standards of Iranian hospitals/ 4th edition / 2019 ISO 13485:2016, medical devices — quality management systems - requirements for regulatory purposes	IM
5	Is there a plan for administrative controls and reduction of exposure time for doctors and staff? (staff exposure is in the approved range)	Critical			Is the radiation exposure values in accordance with the occupational exposure limits (OEL)? Reduction of working time Radiation vacation	Radiology technical supervisor	The radiation protection act / approved by the council of ministers / Oct 2006	IM

No.	Title	Status	Response		Evidence and Observation	Interviewee	National Reference	Medical Equipment
			Yes	No				
6	Have engineering controls been conducted, such as creating barriers, enclosing and increasing the distance to reduce staff exposure?	Critical			Is there a barrier, a blockade and an increase in the distance to reduce staff exposure according to the guidelines for measuring and evaluating radiation in the workplace?	Radiology technical supervisor	National accreditation standards of Iranian hospitals/ 4th edition / 2019 the radiation protection act / approved by the council of ministers / Oct 2006	IM
7	Is the personal protective equipment used suitable for the ward? And also, guidelines are available?	Critical			Is personal protective equipment (such as lead coatings, gonads and thyroid shields, lead paravane, and lead glasses) used? Documentation on periodic inspection of suitability and use of personal protective equipment.	Radiology technical supervisor	The radiation protection act / approved by the council of ministers / Oct 2006	IM
8	Are there warning signs and information related to radiation protection? Are they installed in an appropriate place?	Non-Critical			See warning signs and related information At least one or more relevant personnel should be asked about warning signs	Radiology technical supervisor	guideline for using caution signs / MOHME hospital establishment and operation by-law/ ministry of health and medical education/ March 2005	IM
9	Are guidelines available for staff to clean and disinfect medical devices?	Non-Critical			see related guidelines	Radiology technical supervisor	National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM

3- Staff health

No.	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
1	Is there a medical record for staff?	Non-Critical			Is there medical record for all of staff? Is there exposure-based examinations for staff? Record of follow ups made	Occupational health expert	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
2	Is personal protective equipment (PPE) available for personnel depending on the type of hazardous agent?	Critical			Is there appropriate PPE in ward? List of PPE needs assessment equipment by the occupational health expert/laboratory director	Users/ occupational health expert	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
3	Is there a proper program for occupational health training for different job groups?	Non-Critical			Training records	Staff	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
4	Is there a regular program for infection control in hospital?	Non-Critical			Microbial culture result of sites Records of infection control committee Washing/cleaning program	Infection control supervisor	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
5	Are staff trained about needle stick preventions and action taken after it?	Non-Critical			Training records	Staff / training supervisors	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)

4- Safety in the workplace

No.	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
1	Is there a technical inspection of the equipment? And essential environment requirements for safety and security of the equipment, including (appropriate earthing system, electricity voltage, stabilizers, isolation transformer and backup generators) are in place?	Non-Critical			Records of inspections performed Certificate of earthing system for building and medical devices Inspection ID Existence of stabilizers (for all medical devices with electronic parts and all the equipment using emergency power), isolation transformer (in ICU, NICU and CCU) and emergency power generator	Technical supervisor H/L Rep.	Instructions for safe power supply in medical centers / national medical device directorate/ 2008	General (IM, CL, Lab)
2	Is the crisis management system implemented in hospital?	Critical			Records of crisis management committee	H/L Rep.	National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM CL
3	Does the hospital have the approval of firefighting standards from the relevant fire department regarding fire alarm and extinguishing system?	Critical			Location of fire extinguisher Approval of firefighting standards from the regional firefighting department or the existence of process and equipment fire alarm and extinguishing	Technical supervisor H/L Rep.	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
4	Are fire extinguishers available in accordance with the type of fire and electrical equipment?	Critical			Observing fire extinguisher capsules based on firefighting approvals		National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
5	Are manual and automatic fire alarm systems visited periodically?	Non-Critical			Periodic inspection records (expiration date, appropriate installation height, recharging date, etc.)	Technical supervisor H/L Rep.	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
6	In case of accidents, is the lessons-learnt form completed and sent to the relevant health center?	Non-Critical			Documentation of completed and submitted accident form		ISO 22320:2018, Security and resilience – emergency management – guidelines for incident management	IM CL

No.	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
7	Is there a safety training program for working with hazardous equipment?	Non-Critical			Training records	Training supervisor	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
8	Is there an information exchange program for occupational hazards?	Non-Critical			The existence of SDS Labeling based on the GHS Users should be asked about working with hazardous radioactive, biological and chemical substances	Technical supervisor H/L Rep. Staff	National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM CL
9	Are emergency/warning signs displayed for public awareness?	Critical			Emergency exits sign No smoke sign Fire distinguisher notice Caution signs		Using safety and warning signs / MOHME	General (IM, CL, Lab)
10	Are there any plans for medical equipment fixation?	Non-Critical			Observing fixture of equipment e.g. medical gas cylinders	Technical supervisor H/L Rep.	ISO 22320:2018, Security and resilience – emergency management – guidelines for incident management	IM CL

5- Waste management

No.	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
1	Are the produced wastes separated into four main groups (normal, infectious, sharp/cutting, pharmaceutical/ chemical)?	Non-Critical			Record of separation program Observing separated wastes	H/L Rep. occupational health expert	Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)
2	Are coding and labeling of bags and waste containers based on four groups?	Non-Critical			Coding documentation		Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)
3	Is the temporary collection and storage of waste done properly? They must be carried in safe containers.	Non-Critical			Is waste collected in washable pedal containers with a lid? Adequate refrigerator (size/proper function)		Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)
4	Is waste treatment and disposal carried out in accordance with the approved criteria?	Critical			Records for purchasing a waste treatment system (such as autoclave) OR outsourcing contract or service purchase order	H/L Rep. occupational health expert	Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)
5	If any autoclave for waste treatment exist, is it suitable?	Critical			Records of PM Records of Quality control Records of biological and chemical indicators used in autoclave	H/L Rep. occupational health expert	Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)
6	Are the waste disposal workers using appropriate PPE and are they provided with the necessary training?	Critical			Using appropriate PPE like resistant gloves, mask and suitable cover bath Training records	Waste disposal related staff	Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)
7	Is the installation site connected to the main sewer of the center?	Critical			Records and technical specifications of the building		Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)
8	Is the main sewage of the center connected to the municipal sewage system?	Non-Critical			Measurement of BOD and COD is necessary License of water and wastewater company or local environmental authority		Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)

No.	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
9	In case it is not connected to the municipal sewage, is proper disinfection done?	Non-Critical			Measurement of BOD and COD is necessary Disinfection program documents		Waste management law / 2004 WHO - essential environmental health standards in healthcare	General (IM, CL, Lab)

6- Supervisory mechanism

No.	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
1	Does the hospital have an occupational/environmental health expert?	Critical			Employment/contract personnel order	H/L Rep.	National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
2	Does the hospital have a medical equipment expert?	Critical			Employment/contract personnel order	H/L Rep.	National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
3	Does hospital have a preventive maintenance plan?	non-critical			List of equipment PM plan	H/L Rep.	National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
4	Are medical devices or measuring equipment in laboratories calibrated?	non-critical			Calibrating certification Calibrating plan Contracts	H/L Rep.	National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
5	Are there mechanisms in place for patients, facility personnel, and clients to share/raise their views, comments or complaints to the facility's services?	Critical			Existence of specified hotline/telephone number, boxes for letters, offices for collecting or addressing the raised issues by patients, etc.	Internal manager	Patient Right Charter, national regulations for patient /client right	General (IM, CL, Lab)
6	Is there a process in place to inform patients, facility personnel, and clients about existence of mechanisms to collect their complaints or gratitude regarding facility's services?	Critical			Existence of the Patient Right Charter on the wall, visible and accessible to all patients, signs and announcements of hotline numbers for this reason, availability of box for letters of patients/ clients in a common place/visible/accessible, sign on the room for collecting/addressing issues/ concerns (if exist) etc.	Internal manager	Patient Right Charter, national regulations for patient/client right	General (IM, CL, Lab)

7-Patient Safety

No	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
1	Whether policy, program and patient safety action plan (e.g. required training plans for all staff and correction measures) is in place in the health care/hospital setting?	Critical			Documentation of policy, planning, action plan and training courses must be available Training records	H/L Rep. Staff	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
2	Is patient safety and risk management coordinator with clear responsibilities and required authorities assigned?	Critical			Employment/contract personnel order Assignments	H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
3	Is senior management conducting a regular walk round for promoting patient safety, identifying risks and taking opportunity for improvement?	Critical			Records of scheduled walk, risk identification	H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
4	Existence of mortality, morbidity and infection control committees in the hospital and available SOPs.	Critical			Records of committees being held	H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
5	Functional CSR (central sterilization room) department in the hospital including all standard operating procedures (SOPs), trained staff, required equipment and supplies.	Critical			Records of microbial culture tests both site and packs Records of biological indicators Observing functional central sterilization room (separated clean and dirty room, suitable sterilization machine with valid certificate and suitable washing and cleaning system)	H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
6	Availability of all emergency equipment in the hospital (including patient monitor, defibrillator, oxygen source, anesthesia machine...) and critical medicine.	Critical			Records of PM and quality control Observing equipment and critical medicine inventory list	Clinical supervisor H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL

No	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
7	Existence of policy, protocols and materials for disinfection and sterilization and availability of single use instruments and supplies (syringes, gloves, gown and disinfectants)	Critical			Observing instruments and supplies Disinfectant guidelines for hand, medical devices and surfaces	Clinical supervisor H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
8	Patient registry, identification (with at least two indicators) and health profile completeness and confidentiality are strictly observed and applied (patient coding)	Critical			Hospital Information System (HIS) Observing patient registry and health profile	Clinical supervisor H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)
9	Complete and functional protocol for labeling of drugs/medicine, agents, instruments and appliances.	Critical			Observing labels	Clinical supervisor H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
10	Qualified clinical staff, both permanent and temporary, operating target medical instruments (nurse, technicians, medical doctors, specialists and assistants) are on board.	Critical			Employment/contract personnel order of qualified staff Training records	Clinical supervisor H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
11	Code of patients' rights existence and visible to patients. Consent form is available and signed for possible interventional and invasive procedures (explained in detail) by the patient or legal representative.	Critical			Records of completed consent forms must be available Observing code of patient rights exists and displayed to the public	Clinical supervisor H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	IM, CL
12	There are communication lines for alerting/commuting patients regarding critical test results.	Critical			Communication gates	H/L Rep.	WHO: patient safety assessment manual (2nd edition) National accreditation standards of Iranian hospitals/ 4th edition / 2019	General (IM, CL, Lab)

No	Title	Status	Response		Evidence and Observation	Interviewee	National/ international Reference	Medical Equipment
			Yes	No				
13	Hospital is applying national evidences and protocols/standards for safety of blood and blood products.	Critical			Records of blood bank	Clinical supervisor H/L Rep.	In accordance with blood bank activity and consumer wards by-law in health centers	IM, CL
14	Hospital is using a safe pre-transfusion procedure e.g. recruitment, selection and retention of voluntary blood donors, blood screening (e.g. HIV, HBV).	Critical			Guideline for immune blood transfusion	Clinical supervisor H/L Rep.	In accordance with blood bank activity and consumer wards by-law in health centers	IM, CL
ECMO staff: Heart and vessels surgeon/ Heart anesthesiologist/ ICU subspecialist/ interventional cardiologist/heart failure subspecialist/ neonatal cardiologist/neonatal subspecialist/ perfusion expert/ trained ICU nurse/ rehabilitation expert /nutrition expert								
CRRT staff: ICU subspecialist/ nephrologist/Trained or skilled nurse in dialysis or ICU fields								

Annex II

MOHME, WHO and TÜV NORD Iran focal points:

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TÜV NORD Iran focal point:
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Annex III

Expected authorities/officers to be present at facility at on-site assessment day

- Chair/director or internal manager
- Secretariat of mortality committee
- Matron or head nurse
- Secretariat for infection prevention committee
- Focal point for environmental and occupational health
- Focal point for public awareness and education
- Focal point for waste management
- Focal point for patient registry
- Focal point for disaster management
- Public relations
- Chair of relevant wards

Annex IV

Outline of briefing session for focal points from university of medical sciences and selected hospitals/ laboratories

A virtual training will be conducted for the focal points of the universities of medical science and the facilities to be assessed by TÜV NORD Iran.

Objective:

- Introducing the assessment information package, plan and procedure
- Introducing the assessment tool

Agenda:

Time	Subject	Presenter
Online session via link provided by **TÜV NORD Iran**	Introduction to the project and objectives	TÜV NORD Iran
	Introduction to the assessment tool	
	Review assessment tool questions and guideline	
	Review data analysis and grading of recommendations	
	Q&A	

Annex V

Assessment plan

Agenda of visit to ……..(Hospital or Laboratory name)

Master Data of Organization	
Name of Organization	
Street	
Postcode/Town/Country	
Organization Representative	
Contact	
E-Mail	
Phone/Fax	
Language	Farsi, English
Medical Equipment	
Assessment profile	
Assessment type	Initial On-site Assessment
Assessment Date	Day , 00.00.2020
Assessment team leader / responsible	
Audit team	
Shift operation	

Date/ Time[1)]		Area / Subject	Medical Equipment	Auditor (Initials)	Contact
		Opening meeting	---	Team	Org. Rep.
		General Aspects and Documents Emergency Plan Building / Facility Energy Consumption	---	//	Org. Rep.
		Related Location		//	Technical Supervisor
		Closing			Org. Rep.
from to modifications are possible [1)]					

Distribution	
Organization, assessment team, assessment documentation, WCO	
Editor	
Date:	00.00.2020
Person in charge:	

ICERP

Iran COVID-19 Emergency Response Project

Environmental & Social Workstream

Integrated Design: Bahman Riazifar
WHO Country Office - Iran

Annex 3: Lessons learned from Environmental and Social assessment in the parent project

During the final phase of the E&S assessment, the team of E&S workstream documented the lessons learned from the E&S assessment through in-depth interviews with project management and implementing parties of the project. Lessons learned documentation planned and outlined during quarter two of ICEPR reporting. Then, interviewee levels identified, and sets of relevant questionnaires that cover all aspects of project, risk, and communication management developed. Interviews arranged with all engaged parties with E&S assessment, including WCO as the project manager of ICERP, MOHME authorities (International relations (IRD), laboratory and hospital affairs) as the main stakeholders of the project, and TÜV Nord Iran as the technical implementing party of E&S assessments. A consent form presented to and signed by all the interviewees. The interviews recorded and later transcribed. We reviewed and summarized the major lessons learned from E&S assessment of ICERP as a jointly developed document with MOHME, WCO, and TNIR.
Objective of lessons learned is to share the experience of environmental and social assessment and activities in ICERP to promote the desirable outcomes, and achievements from resolving undesirable outcomes. In this practice, lessons learned gathered from interviews and discussions with the main stakeholders of the project implementation, i.e., WCO management team, MOHME management team, TÜV NORD Iran team, MOHME and WCO technical teams. The three main subjects and themes of this developed lessons learned document are based on the interviews and discussions conducted around learning points of E&S workstream activities in ICERP and includes adaptive assessment platform for Iran status and circumstances, managing project implementation and risk mitigation in COVID-19 emergency and restrictions and communication pathways with predefined mechanism among all parties. Illustration of lessons learned points and subthemes are provided as following.

- **Adaptive assessment platform for Iran**

1. Standardized, adapted E&S checklist

The developed checklist was successfully utilized in the assessments without noticing any incompatibility to the national context. The checklist was developed with collaboration of all parties according to national and international evidence, guidelines and tools for E&S assessment tailored for Iran.

2. Systematized, stepwise assessment mechanism

The assessment and grading mechanism developed via stepwise flowcharts of work for the two phases of initial and follow-up assessment. According to which, the teams, roles, and steps all defined. In order to keep the process unbiased, the teams designated for each part of the process, i.e., assessors, grading panel, and interpretation reporting team were all independent professionals. Also, the feasibility and applicability of recommendations to non-conformity resolutions validated, verified, and consolidated during reporting to MOHME after grading of the assessments.

3. A comprehensive data gathering, analysis, and communication platform

A web-based platform (PADMAN) developed for assessment planning, data gathering and communication at several levels of access, from TUV Nord Iran as implementing partner, their

assessors for receiving assessment assignments and entering the assessment data into each checklist question of assessed sites, to WCO team as the E&S assessment collaborator, grading panel, and the technical facilitator between MOHME and the third party (TUV Nord). The platform designed to serve the planning, assessment, grading, and follow up processes, along with a data collection and analysis resource for the E&S assessment.

Key message: Cooperation and flexibility do not necessarily contradict with strict timelines and staying professional

4. Amenable project management and risk mitigation during COVID emergency

1. Prevention measures against COVID-19

Field visits had a standard protocol to minimize the exposure to COVID-19 and assessors were guided throughout the assessment period. In addition, a self-protection guide against COVID-19 was developed for awareness raising and orientation of the assessors and all team members engaged in the field visits. Flexible and dynamic coordination mechanism with all parties was developed and executed to ensure minimum delays in implementation of the initial and follow up assessments. No COVID-19 cases related to the assessments was reported during the course of project.

2. Dynamic, participatory, and productive decision making

Dynamic planning along with the built trust among parties and mutual understanding of the emergency situation resulted in suitable and interactive management strategies, productive and participatory decision-making approaches. This continuous flexibility in implementation of project, overcame the raised sensitive issues.

Key message: Try to be part of the solution not the problem

3. Effective communication mechanism and channels

1. Hierarchical chain of communication

MOHME, university of medical sciences (UMS), health facilities, TUV Nord Iran and WCO communicated with predefined channels and followed certain approach to maintain the constructive correspondence and relation with one another. Straightforward engagement pathway among parties and sufficient lines of communication was the result of this operative communication mechanism.

2. Effective orientation and engagement of partners

Conducting multiple briefing sessions for MOHME, UMS focal points and TUV Nord Iran assessors (in terms of communication channel) were successful to raise awareness regarding the assessment concept and necessity, responses to COVID-19 emergency, define risk mitigation mechanism and stakeholder engagement. Appropriate readiness for assessment, successful implementation of the assessments and sufficient improvement of identified non-conformities based on the assessments were the outcome of the performed effective communication and coordination.

Key message: Safety should be the top priority of any project

Recommendations for future

1. The environmental, occupational, and patient safety (E&S) assessment tool developed during this project identified some non-conformities in the laboratories and hospitals for their resolution of which, there are already rules, mechanisms, and guidelines in the health system; however, they seem to be overlooked in practice. Therefore, the authorities are considering integration and incorporation of the E&S assessment tool in the health system management. The assessment tool itself could be subject to further review and required adjustment based on the results of this project and intention of the ministry of health for integration in the health management system.
2. The ministry of health has inspired from this project to scale up health system development procedures by developing guides and instructions for development and upgrading health facilities, direct engagement, and leadership in implementation of development process.
3. The unbiasedness of the E&S assessments plays an important role in ensuring the resolution of non-conformities and meeting the associated standards. Further capacity building in national level, both within and independent from health system, is recommended to support situation analysis, gap identification, and strengthen capacity for required improvement.
4. As E&S assessment and the ICERP project involves various parties and stakeholders, the implementation of the project faced some delays due to bureaucratic, multilevel processes and communication chains. In order to resolve this challenge for future, it is considered to shorten the communication pathways by an interactive website to be developed which has different levels of access and information, and more direct lines of communication with beneficiaries during the process.

Annex 4: Measures for possible minor civil works

Healthcare facilities that are planned to receive medical equipment will provide a room with the device requirements to install and utilize the equipment. If there would be some facilities that need minor civil works and adjustments of the provided room to meet the supplier technical requirements to install the device, Occupational Health and Safety and Waste Management considerations must be followed.

In this regard two scenarios of minor construction activities are identified:

1. Contracts with contractors

   If there will be a contractor to carry out the minor civil works work, OHS and waste management measures need to be included in the contract based on the national laws and regulation. E&S obligations will be verified and validated prior to final payment of contract.

2. Healthcare facility staff

   If the facility has the required staff and resources to implement minor construction work, OHS and waste management measures will be monitored by the facility and in-house occupational and environmental expert in accordance with the national laws and regulation.

Annex 5: E&S milestones and progress in the parent project

Months	Status	25%	50%	75%	100%
June	Preparatory phase	Orientation on WB environmental and social standards for all team members			
		Identifying standards applied to this project			
		Team building; recruiting a full-time technical consultant and a consulting company (TÜV NORD Iran)			
July		Developing an assessment tool			
		Stakeholder engagement initiation			
		Piloting the assessment tool at three selected sites			
Aug	Assessment and follow up phase	Data dashboard development and implementation (PADMAN)			
		Assessment of all sites (165 hospitals and laboratories)			
		Grading mechanism development and implementation			
		Reporting sites grading to MOHME for follow up			
Sep	Continued assessment and follow up phase	Data collection format of PADMAN improvement			
Oct		Assessment of 14 newly added hospitals to receive medical equipment making the total recipient facilities, 179.			
		Re/remote follow-up assessments with non-compliant sites based on recommended actions and documents in coordination with M OHME			
Nov		Grading re/remote assessments, based on the documents provided by the facilities, and reporting to MOHME			
Dec		Compliance of 175 sites out of 179 facilities in the project is achieved. 36 were initially compliant and 139 fulfilled the recommended actions and submitted documents (up to date of this report).			
Jan	Assessment and follow up phase and documentation of lessons learned	Assessment of 2 newly added laboratories to receive lab equipment making the total recipient facilities, 181. One was graded green and the other one was added to the list of follow up assessment with the yellow grade.			
Feb		In-depth interview sessions with WCO, MOHME and TNIR teams to document the lessons learned from E&S component of ICERP.			
		On 28 February 2021 E&S workstream was informed that MOHME has introduced one new hospital to receive CT scanner which was allocated to another already assessed and green graded hospital. E&S assessment will be conducted for this newly added hospital.			
March		E&S compliance of 180 sites out of 182 facilities in the project is achieved. There are two hospitals (recipient of CT scanner) subject to follow-up assessment with brown grades which are considered as open cases.			
April		Several online follow up sessions and teleconferences were held to review and assist the two brown graded hospitals to be prepared for follow up assessment (on-site and remote). Remote assessments were conducted for the two remained hospitals. Follow up grading results of both hospitals were green and compliant.			
May		E&S compliance of all 182 ICERP facilities is achieved. 137 hospitals and 45 laboratories are fully compliant with the E&S assessment and all required standards, procedure and activities based on the equipment type are in accordance with the defined criteria.			

Annex 6: List of activities and products of the E&S assessment in the parent project

	Process	Product
Preparatory Phase	Recruiting a consulting company • Terms of reference, RFP, and cover letter development • Approval from CEHA and EMRO • Bidding process Assessment Tool Development • Literature review on relevant national and international documents and standards • Drafting a checklist based on international and national standards and WB ESS • Reviewing in team with MOHME teams (curative affairs, environmental and occupational health, public health reference laboratories department, etc.) • Finalizing 60 questions in 7 clusters: building, radiation protection, staff health, safety in workplace, waste management, supervisory mechanism and GRM and patient safety Pilot assessment • Identifying three sites, one laboratory and two hospitals • Validity (face, content, and construct) check of the prepared assessment tool Stakeholder engagement • Four phone lines for calling focal points • Webinar for briefing WCO team • Webinar for briefing with MOHME • Video instructions and flyers and precautionary product for field visits for assessors • Weekly webinars with Q/A section held and focal points for university focal points • Developing a comprehensive information package tailored for sites Data dashboard • Data gathering and visualization dashboard that developed with TÜV NORD Iran	• E&S information package and assessment tool as attachment
Assessment phase and grading mechanism	Site Assessments • Planning weekly for assessments • Informing the plan to MOHME for confirmation and providing focal points • Contacting focal points for weekly briefing sessions and providing information package • Briefing focal points and providing information on the assessment tool, date and time of assessment, and name of the assessor • Ensuring arrival of assessors on sites at the planned sites • Attendance of WCO team at selected sites for assessment process observation and monitoring Grading mechanism • Color-coding based on number of identified non-conformities from the result of the on-site assessment, critical/non-critical status of non-conformities, time needed to comply with all recommendations for readiness, and the need for the on-site re-assessment or only remote assessment. ○ *Compliant – Green Flag:* The H/L is fully in conformance with the criteria mentioned in assessment checklist and equipment could be installed/used without any reservation. ○ *Tolerable – Yellow Flag:* There are some deviations which does not limit the capability of the H/L to achieve the intended results. After submission of documents related to elimination of deviations, the equipment could be received, installed/used. ○ *Conditional – Brown Flag:* There are some deviations which limit the capability and ability of the facility to safeguard the environmental, occupational health and patient safety standards and the medical equipment procured by ICERP and allocated by MOHME to the facility can NOT be installed/used without needed corrective actions in proper timeline aligned with ICERP life cycle. Brown flag centers' compliancy were reassessed remotely or on site. ▪ CT scanner or X-ray angiography machine brown flag: ▪ If a hospital receives a CT Machine or Angiographic X-ray, the hospital was flagged as brown and the hospital needs to fulfil requirements of an associated dossier profile for each facility before delivery/installation of the equipment. ○ *Reject – Red Flag:* The H/L is not in conformance with the criteria of assessment checklist and there is considerable doubt that efficient corrective actions could be realized and implemented in proper timeline aligned with project life cycle. In consultation with the MOHME, such a H/L would be removed and replaced with another hospital or laboratory, as applicable. • Initial grading meetings between TÜV NORD Iran and WCO • Reporting initial grading to MOHME for communicating results with sites	• Assessment phase with participation of E&S workstream (WCO) and TNIR management team • Full initial grading report (presentation) of 182 facilities • Starting grades and status of readiness of sites before follow-up assessments

	Process	Product
Follow up Phase mechanism and implementation	Follow up mechanism • Follow up assessments were classified and determined in two forms of remote assessment or on-site reassessment which was done according to the recommendations during the grading exercise. • Facilities (Hospitals and Laboratories) submit their readiness documents according to the grading recommendations and deadlines. • MOHME collects, cleanup and compile submitted documents by H/L and other required information and make them ready and available for joint desktop review according to the follow up table provided by TÜV NORD Iran. • Prepared documents and evidence reviewed by assigned assessors in a joint meeting during a working session. • Brown flagged sites were subject to on-site reassessment or comprehensive remote follow up assessment with additional evidence including photo and videos. • Follow-up grading of the conducted remote assessments and on-sites re-assessments determined in joint meetings (TÜV NORD Iran and WHO) • The results of follow-up measures as grading scores and recommendations (if any) tables shared with MOHME and reviewed and confirmed accordingly. Follow up implementation • Follow-up desktop remote assessment weekly sessions by two of TÜV NORD Iran assessors at MOHME (presenting required documents to the assessors submitted by non-compliant sites to MOHME) • Non-CT sites and laboratories submitted the documents of their non-conformities listed at the initial grading of E&S assessment results • CT-receiving sites submitted Dossier documents which include a list of readiness documents to receive a CT Scanner at hospitals. Those without building for CT-scanner, also submitted proof of physical space. • Selected brown flagged sites which need on-site re-assessment were assessed by assigned assessors according to follow-up plan. In cases related to CT scanner building identification, the hospitals guided to submit their readiness and fulfillment of requirements for E&S standards by approved construction map of CT scanner ward, photos, and videos from the prepared ground for a remote/comprehensive follow up assessment. • Joint weekly grading sessions on fulfillment of non-compliant sites with TÜV NORD Iran • Reporting remained non-compliant sites to MOHME with the list of non-conformities • This process continued until all the non-compliant sites with reported non-conformities fulfilled the recommended actions and submitted the related documents in a remote assessment session or an on-site reassessment.	• Follow up mechanism flowchart • Follow-up sessions, gradings, and decision-makings • Follow up grading reports • Final and overall E&S grading results

Lessons learned interview and documentation	Documentation of the E&S lessons learned and findings in ICERP
	• Arrangements to document the lessons learned from E&S assessments
	• Developing outline for joint WCO/ TÜV NORD Iran /MOHME document about findings of the ICERP E&S assessment and activities
	• Developing interviewee-based questionnaire for conducting in-depth interview sessions with WCO/TÜV NORD Iran/MOHME
	• Developing consent form to be signed by interviewees, confirming their consent to document and report the good practices implemented throughout the project.
	• Interviewees answered willingly to three categories of questions including:
	  ○ Project, time, and HR management
	  ○ Risk and change management
	  ○ Communication management
	• Shortlisted persons interviewed:
	  ○ WCO: WHO representative in Iran
	  ○ WCO: ICERP management team
	  ○ MOHME: Hospital management center
	  ○ MOHME: Public health reference laboratories
	  ○ TUV NORD Iran: Project management team
	• Developed summary of lessons learned results in English and Farsi
		• General outline for documenting findings and lessons learned
		• Interview consent form
		• Lessons learned report of E&S component of ICERP in English and Farsi

Annex 7: Resource List: COVID-19 Guidance

WHO Guidance

Advice for the public

- WHO advice for the public, including on social distancing, respiratory hygiene, self-quarantine, and seeking medical advice, can be consulted on this WHO website:

Technical guidance

- Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected, issued on March 19, 2020
- Recommendations to Member States to Improve Hygiene Practices, issued on April 1, 2020
- Severe Acute Respiratory Infections Treatment Center, issued on March 28, 2020
- Infection prevention and control at health care facilities (with a focus on settings with limited resources), issued in 2018
- Laboratory biosafety guidance related to coronavirus disease 2019 (COVID-19), issued on March 18, 2020
- Laboratory Biosafety Manual, 3rd edition, issued in 2014
- Laboratory testing for COVID-19, including specimen collection and shipment, issued on March 19, 2020
- Prioritized Laboratory Testing Strategy According to 4Cs Transmission Scenarios, issued on March 21, 2020
- Infection Prevention and Control for the safe management of a dead body in the context of COVID-19, issued on March 24, 2020
- Key considerations for repatriation and quarantine of travelers in relation to the outbreak COVID-19, issued on February 11, 2020
- Preparedness, prevention and control of COVID-19 for refugees and migrants in non-camp settings, issued on April 17, 2020
- Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health, issued on March 18, 2020
- Oxygen sources and distribution for COVID-19 treatment centers, issued on April 4, 2020
- Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response, issued on March 16, 2020
- Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19), issued on March 19, 2020
- Operational considerations for case management of COVID-19 in health facility and community, issued on March 19, 2020
- Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19), issued on February 27, 2020
- Getting your workplace ready for COVID-19, issued on March 19, 2020
- Water, sanitation, hygiene and waste management for COVID-19, issued on March 19, 2020
- Safe management of wastes from health-care activities, issued in 2014
- Advice on the use of masks in the community, during home care and in healthcare settings in the context of the novel coronavirus (COVID-19) outbreak, issued on March 19, 2020
- Disability Considerations during the COVID-19 outbreak, issued on March 26, 2020
- Global manual on Surveillance of adverse events following immunization, issued 2016
- How to monitor temperature in the vaccine supply chain, issued July 2015

WORLD BANK GROUP GUIDANCE

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

MFI GUIDANCE

- EBRD COVID-19 resources (includes list of websites providing information on Covid-1 (and guidance materials and resources provided by IFIs)
- ADB Managing Infectious Medical Waste during the COVID-19 Pandemic
- IDB Invest Guidance for Infrastructure Projects on COVID-19: A Rapid Risk Profile and Decision Framework
- KfW DEG COVID-19 Guidance for employers, issued on March 31, 2020
- CDC Group COVID-19 Guidance for Employers, issued on March 23, 2020
- CDC Vaccine Storage and Handling Toolkit, issued 2020