

# ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) CHECKLIST

FOR PROCUREMENT AND USAGE OF MEDICAL DECONTAMINATION AND INSULATION TENTS



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#### **ABBREVIATIONS**

Abbreviation	Full term
CIEM	Croatian Institute of Emergency Medicine
E&S	Environmental and Social
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
HCF	Health Care Facility
ICWMP	Infection Control and Waste Management Plan
МоН	Ministry of Health
MoPPCSA	Ministry of Physical Planning, Construction and State Assets
NBC	Nuclear, Biological or Chemical
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
WB	World Bank
WHO	World Health Organization

#### 1 INTRODUCTION

The World Bank (WB) is providing support to the Government of Croatia in implementing the "Croatia Earthquake Recovery and Public Health Preparedness Project".

On March 22, 2020, the City of Zagreb was struck by the earthquake (magnitude ML5.5), which severely damaged public buildings, hindering the effective delivery of health and education services and directly affecting the economy of the cities, municipalities, counties and the country. The earthquake took place 11 days after the World Health Organization (WHO) declared COVID-19 to be a pandemic, a crisis that has stressed both the health system and public finances, which additional hinders much needed earthquake recovery.

In the addition to the above mentioned, the two shocks (earthquake and COVID-19 crisis) have also revealed that further work is needed around strengthening the institutions required for resilience and response to future shocks.

Given the above, within project "Croatia Earthquake Recovery and Public Health Preparedness Project" WB assist The Republic of Croatia with earthquake reconstruction efforts in City of Zagreb, and Zagreb, Krapina-Zagorje, Karlovac and Sisak-Moslavina counties, improve institutional capacity for reconstruction, and strengthen national systems for public health preparedness.

A focus on public health preparedness is rooted in the Government's recognition that there is a need to prepare for a 'new normal', where health agencies will need to play a greater role in adaptive emergency response.

The "Earthquake Recovery and Public Health Preparedness Project" consists of following project components and sub-components:

#### **Component 1: Earthquake Recovery and Reconstruction**

- Subcomponent 1.1: Immediate Public Safety Interventions
- Subcomponent 1.2: Rehabilitation and Reconstruction of Health and Education Facilities
- Subcomponent 1.3: Housing Reconstruction Support Program Design

#### **Component 2: Public Health Surveillance and Preparedness**

- Subcomponent 2.1: Case Management and Surveillance
- Subcomponent 2.2: Public Health Preparedness

#### **Component 3: Project Management**

Regarding health sector investments, the proposed project <u>will support investments to respond to critical preparedness needs while considering the importance of improving the efficiency and quality of health care services.</u> The project will not seek to create excess secondary and tertiary capacity, such as by increasing the number of permanent acute beds. Rather, it will seek to support the restoration of critical services through the financing of the reconstruction of investments that benefit health outcomes and improve service delivery, in accordance with sector priorities.

#### Croatia Earthquake Recovery and Public Health Preparedness Project (P173998)

Table 1. Summary of the subcomponents for Component 2

Subcomponent 2.1:	Subcomponent 2.2:
Case management and Surveillance	Public Health Preparedness
This subcomponent will focus on case detection and confirmation, contact tracing, recording and reporting capabilities, and surveillance to strengthen	This subcomponent will support the health care system for preparedness planning to provide optimal medical care, maintain essential community services,
the Government's capacity to promptly and proactively manage future outbreaks. Also, this	and minimize risks for patients and health personnel, in part by training health facilities' staff and frontline
component will ensure repair and rehabilitation of	workers on risk mitigation measures and <b>providing</b>
public health laboratories.	them with supplies and equipment for future emergencies.
This subcomponent would:  a) strengthen disease surveillance systems and equipment, public health laboratories, and epidemiological capacity for early detection and confirmation of cases; b) support the repair and rehabilitation of public health laboratories; c) support the development of systems for active contact tracing and reporting of new cases; and d) support epidemiological and laboratory investigation of selected health conditions.	This subcomponent will include:  a) providing emergency medical vehicles, medical and laboratory equipment and supplies, medicines, technical assistance and training to public health officials and health care workers, all to strengthen capacity of the health system to respond to public health outbreaks; b) providing personal protective equipment (PPE) and gear for health care workers and public health rapid response personnel (such as relevant medical specialists, veterinarians, and entomologists); c) providing equipment and supplies for telemedicine to monitor and support patients to support the health system as needed; d) repurposing and equipping selected health care facilities to deliver critical medical services and cope with increased demand for services in a public health outbreak; e) supporting institutional and organizational restructuring of facilities for managing public health emergencies and training of health care
	staff accordingly, including sector-wide planning activities for medium- and long-term needs.

This sub-project includes procurement of medical tents for decontamination and insulation which will be used exclusively in crisis situations, meaning it falls under the Subcomponent 2-2 of the Project.

#### 1.1 Sub-project description and planned activities

The sub-project area is the whole territory of Republic of Croatia, more precisely 32 hospitals in 26 cities:

County	No.	City	Hospital		
City of Zagreb	1.	Zagreb	University Hospital Centre ZAGREB		
	2.	1	University Hospital Centre "SESTRE MILOSRDNICE"		
	3.	1	Clinical hospital DUBRAVA		
	4.	1	Clinical hospital MERKUR		
	5.	1	Clinical hospital "SVETI DUH"		
	6.	]	University Hospital for Infectious Diseases "DR. FRAN		
			MIHALIEVIĆ"		
	7.	]	Children hospital ZAGREB		
County of Krapina- Zagorje	8.	Zabok	General Hospital ZABOK and Hospital of Croatian Veterans		
County of Varaždin	9.	Varaždin	General Hospital VARAŽDIN		
	10.	Čakovec	County Hospital ČAKOVEC		
County of	11.	Koprivnica	General Hospital "DR. TOMISLAV BARDEK" KOPRIVNICA		
Koprivnica-Križevci					
County of Bjelovar- Bilogora	12.	Bjelovar	General Hospital BJELOVAR		
County of Virovitica- Podravina	13.	Virovitica	General Hospital VIROVITICA		
County of Požega-	14.	Požega	County General Hospital POŽEGA		
Slavonia	15.	Pakrac	County General Hospital PAKRAC and Hospital of Croatian		
	13.		Veterans		
County of Slavonski	16.	Slavonski Brod	General Hospital "DR. JOSIP BENČEVIĆ" SLAVONSKI BROD		
Brod-Posavina	17.	Nova Gradiška	General Hospital NOVA GRADIŠKA		
County of Vukovar-	18.	Vinkovci	County General Hospital VINKOVCI		
Sirmium	19.	Vukovar	National Memorial Hospital VUKOVAR		
County of Osijek-	20.	Osijek	Clinical Hospital Centre OSIJEK		
Baranja	21.	Našice	County General Hospital NAŠICE		
County of Karlovac	22.	Karlovac	General Hospital KARLOVAC		
	23.	Ogulin	General Hospital and Homeland War Veterans Hospital OGULIN		
County of Sisak- Moslavina	24.	Sisak	General Hospital "DR. IVO PEDIŠIĆ" SISAK		
County of Primorje- Gorski kotar	25.	Rijeka	Clinical Hospital Centre RIJEKA		
County of Istria	26.	Pula	General Hospital PULA		
County of Lika-Senj	27.	Gospić	General Hospital GOSPIĆ		
County of Zadar	28.	Zadar	General Hospital ZADAR		
County of Sibenik-	29.	Šibenik	General Hospital of COUNTY OF ŠIBENIK-KNIN		
Knin	30.	Knin	General and Veteran Hospital "HRVATSKI PONOS" KNIN		
County of Split-	31.	Split	University Hospital of SPLIT		
Dalmatia	31.	Spiit	Offiversity Flospital of SPLIT		
County of Dubrovnik-	32.	Dubrovnik	General Hospital DUBROVNIK		
Neretva	٥٤.	Dubiovilik	General Hospital DobNovivik		
INCICIVA					

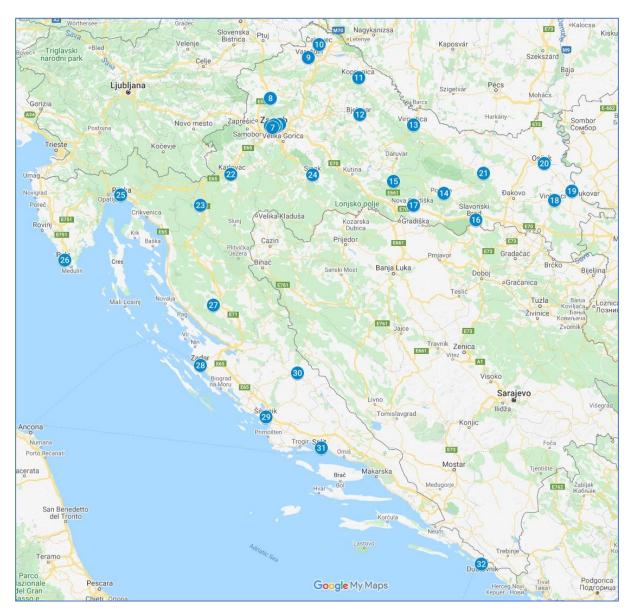


Figure 1. Locations of hospitals in the Republic of Croatia with Emergency department which are the end-users of medical tents (source: Google Map)

Sub-project activity consists of procurement of a total of 37 medical decontamination and 37 medical insulation tents which will be used in above listed 32 hospitals in the Republic of Croatia with Emergency department.

The <u>decontamination tent</u> is intended for immediate decontamination and cleaning of persons or equipment in case of an epidemic or nuclear, biological or chemical (NBC) exposure.

The <u>insulation tent</u> is intended for the isolation of persons in case of suspicion of infection or NBC exposure.

Insulation tent could be used for COVID-19 purposes if needed.

The <u>capacity</u> of the decontamination tent is 1 transport stretcher, while the capacity of the insulation tent is 2 beds or 3 seats. Both tents are inflatable mobile units that will be placed within the hospital area, most probably at the entrance of the hospital or emergency entrance.

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The decontamination tent is <u>equipped</u> with spray nozzles with which the contaminated person and / or equipment is washed to remove biological, chemical and other contaminants. The decontamination process takes approximately couple of minutes to one hour depending on the type of the agent. After decontamination, the person is placed in an isolation tent (waiting room) before entering the hospital.

Tents do not require additional infrastructure, except for <u>electricity</u>. For that purpose, the electricity of the hospital will be used to which the devices are connected via extension cables. Electricity is needed for running the electric air-compressor used for inflating tents, ventilation (e.g. for maintaining negative pressure) (for both types of tents), lights and for the operation of decontamination sprinklers (only in decontamination tent). It is not expected that required electricity supply/consumption would present a significant burden to the grid and existing installations.

The <u>decontamination liquid</u> is placed in the reservoir next to the decontamination tent. After washing, the contaminated liquid is collected in the pool placed by the decontamination tent and in tanks which, after being filled, are handed over to authorized companies (for collection of such hazardous waste) for further treatment and processing/disposal. Filled tanks with contaminated liquid are stored at the designated location in each hospital until the arrival of the service.

#### <u>Technical specification of decontamination tents:</u>

- Tent has to be big enough to fit in at least one transport stretcher
- Inflatable tent
- Possibility of access to the inside of the tent from the outside, with gloves. There will be, at least, two access/exit points in tents.
- Possibility of washing with liquid under pressure
- Minimum five sprayers at different heights
- Possibility of storage and drainage<sup>1</sup> of waste liquid
- The construction of the decontamination tent must prevent the unwanted release of contaminated liquid into the environment
- Made of material that provides:
  - Watertightness
  - o Chemical resistance
  - o Resistance to low and high temperatures
- Minimum two entrance/exit points.
- Possibility of visual inspection of the interior of the tent from the outside
- Setting time within 10 minutes
- Carrying and transport bag
- Spare gloves, minimum 4 pairs
- Floor protection from non-slip material, prevents floor damage and reverse contamination
- Electric air compressor for inflating and blowing air power supply 230 V
- Decontamination liquid pump and waste liquid pump
- Decontamination fluid tank

<sup>&</sup>lt;sup>1</sup> drainage in terms of filling the storage tanks. The contaminated waste liquid will not be discharged to surface waters, ground nor to the drainage system.

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- Compatibility of the connection on decontamination tent to an insulating tent
- Maximum weight up to 70 kg
- Compliance with EU directive 2006/42/CE (Machinery Directive)
- Compliance with EU directive 2014/30/EU (The Electromagnetic Compatibility (EMC) Directive)
- Compliance with standard EN 60204 (Safety of machinery Electrical equipment of machines)

#### Technical specification of insulation tents:

- Possibility of creating negative pressure inside the insulation tent
- Filtration provided by HEPA filters that ensure the prevention of the spread of infection or NBC in the environment
- Possibility of visual inspection of the interior of the tent from the outside
- Possibility to insert things inside the tent from the outside without losing negative pressure
- Made of material that provides resistance to biological agents and decontamination
- Resistance to high and low temperatures
- Carrying and transport bag
- Setting time within 10 minutes
- The dimensions of the interior of the tent must allow the patient to be placed in the transport isolation unit without hindrance.
- The ventilation unit (with the purpose of ensuring the negative pressure inside the insulation tent) must allow uninterrupted operation while on battery
- Floor protection from non-slip material, prevents floor damage and reverse contamination
- Electric air compressor for inflating and blowing air power supply 230 V
- Compatibility of the connection on insulating tent to a decontamination tent
- Compliance with EU directive 2006/42/CE (Machinery Directive)
- Compliance with EU directive 2014/30/EU (The Electromagnetic Compatibility (EMC) Directive)
- Compliance with standard EN 60204 (Safety of machinery Electrical equipment of machines)
- Compliance with standard EN 1822 (High efficiency air filters (EPA, HEPA and ULPA))

Due to their size and purpose, tents do not require special protocols for dealing with fires but as tents will be placed near the hospital entrance, there will be fire extinguishers available withing the 30m range from the tents. If this is not the case, tents will be equipped with fire extinguishers.

Company which will deliver tents will perform (one-time) training of hospital technical staff and, where needed, firefighters who will be in charge of setting up and dismantling tents in crisis situations.

#### The sub-project activity could be divided in four phases:

- 1. Preparatory phase
  - Procurement of the equipment (tents and associated equipment)
  - Designating the exact place for tents (near the entrance to the hospital)

 Minimum one training for a minimum of 10 employees of each hospital in order to get acquainted with the operation of the device. Training should be conducted in the premises of each of the hospital before handover and a record should be made of the same.

#### 2. Setting-up the tents

- Setting time: within 10 minutes
- <u>Structure:</u> inflatable mobile units with the capacity of at least one transport stretcher (decontamination tent), and 2 beds or 3 seats (insulation tent); maximum weight up to 70 kg
- <u>Materials:</u> watertightness, chemical resistance, resistance to low and high temperatures, resistance to biological agents and decontamination
- <u>Floor:</u> from anti-slip material, in order to prevent floor damage and reverse contamination
- <u>Electrical installation:</u> No electrical installations, except power outlet extension for electric air compressor for inflating and blowing air, ventilators, filters and decontamination and waste liquid pumps.
- Cooling and heating system: No
- Supply of oxygen: No
- 3. Operational phase (only in case of the crisis)

#### <u>Decontamination:</u>

- Decontamination is a set of methods, means, procedures and organizational measures for the effective elimination of harmful substances. The goal of decontamination is the earliest possible mechanical cleaning of the patient, which reduces health and irreversible changes and prevents contamination of the hospital area. Decontamination in the hospital is necessary in case of arrival of "contaminated" patients or patients suspected of being contaminated, and decontamination was not performed immediately at the scene of the accident. Admission of contaminated patients is considered in the event of a production accident, if hazardous substances are involved, traffic accidents during the transport of dangerous substances, a terrorist attack, etc., as well as in a situation where decontamination could not be carried out on the spot, or if the contaminated person voluntarily left the contamination zone and came to the hospital on his own. Decontamination is performed according to the type of substance that caused the contamination: detoxification (for chemicals), deactivation (for radioactive substances) and disinfection (for biological substances)
- Decontamination methods: Mechanical (extraction, rinsing, wiping); Physical (evaporation, sorption, dilution); Chemical (the reaction of a contaminant with an appropriate reagent, which involves either complete decomposition of the toxic substance or conversion into significantly fewer toxic products or conversion of the compound or form of the compound, from which removal is easier or kills microorganisms by a combination of these methods).

- Each hospital is responsible for preparation and implementation of the work and organizational plan on response to a great accident, which includes all procedures for mobilisation, decontamination, evacuation, communication and coordination, as well as description of responsibilities.
- <u>Guidelines for the treatment of outpatient and inpatient emergency medical</u> <u>services in the event of chemical accidents</u> (CIEM, 2018)
- <u>Insulation</u>: Insulation tents serve as a "waiting room" for the patients after decontamination and before entering the hospital area.
- Hazardous waste management: After washing (decontamination), the contaminated liquid is collected in the pool under the decontamination tent and in tanks. After being filled, tanks are handed over to authorized companies for further treatment and disposal. Filled tanks with contaminated liquid should be stored at the designated location defined in each hospital until the arrival of the authorized service.
  - Each tank for contaminated waste water has the capacity up to approximately 100 I. Approximately, it takes few litres of decontamination liquid per one person, more in case of equipment depending on its type, size, etc.
  - Except contaminated liquid, hazardous waste could also present contaminated cloths, footwears and other equipments which have been in contact with the biological, chemical or nuclear (radioactive) agent.
- Supply of oxygen: No
- 4. Dismantling phase and storage
  - <u>Lifespan:</u> up to 10 years with the regular functionality check after 5 years
  - <u>Single use:</u> No. Tents can be used multiple times. After usage, they have to be decontaminated and stored adequately.

#### 2 ENVIRONMENTAL AND SOCIAL CATEGORY

In order to address the environmental and occupational safety aspects that will arise from the implementation of the project "Croatia Earthquake Recovery and Public Health Preparedness Project", the Environmental and Social Management Framework (ESMF) have been prepared in accordance with the requirements of the WB. In addition to the requirements of the WB Environmental and Social Standards (ESS), the requirements of the WHO (for use of the necessary PPE and adequate medical waste management) was also included in the ESMF.

Following the requirements which arise from ESMF, Environmental and Social Screening Questionnaire and Screening Report has been prepared in order to screen for the potential environmental and social risks and impacts of this sub-project, as well as to establish an appropriate E&S risk rating and specify the type of environmental and social assessment required, including specific instruments/plans.

**Environmental impacts identified in E&S Screening Report:** 

- During the operational phase (usage of the decontamination tents) generation of hazardous
  wastes (mainly contaminated waste liquid, contaminated clothes, PPE, and similar) is
  expected. Potential adverse impacts on environment (contamination of groundwater and
  surface water if there are any in vicinity) could be expected due to potential spill of
  contaminated waste liquid generated during decontamination processes, inadequate storage
  as well as inadequate waste management.
- The environmental risk is predictable. Protocols for preventing key identified risks should exist for each of the hospital, according to the national legislative.
- Due to the following facts:
  - o decontamination tents will be placed within the hospital area,
  - existing (EU compliant) regulatory and institutional framework in the fields of medical waste management, hazardous waste management, safety of machinery, efficiency of filters, and other risks key to environmental protection and life and fire safety,
  - safety precaution measures are defined in the protocols of each of the hospital and are expected to be sufficient to prevent accidents,
  - emergency plans in case of crisis situations are in place for each of the hospitals,

#### risk of serious adverse impact on environment is expected to be LOW.

#### Social impacts identified in E&S Screening Report:

- Social impacts are related to the potential adverse impact on human health in case of unproper management of hazardous waste (more precisely contaminated waste liquid after decontamination processes), and potential fires.
- Due to the following facts:
  - o decontamination tents will be placed within the hospital area,
  - o safety precaution measures are defined in the protocols of each of the hospital and are expected to be sufficient to prevent accidents,
  - emergency plans in case of crisis situations are in place for each of the hospitals,

#### risk of serious adverse social impact is expected to be LOW.

Considering the sub-project activities which consist of the setting up and usage of the medical decontamination and insulation tents in crisis situation (which includes also generation and management of hazardous waste), and according to the WB risk classification, the **environmental risk** is assessed as **MODERATE**. Therefore, it is necessary to prepare the ESMP Checklist.

Due to the tents' capacity and characteristics (mobile inflatable tents for up to 1 person (decontamination tents) and 2-3 persons (insulation tents), no oxygen supply, and the fact that they will be used only in crisis situations at the location of 32 hospitals in Republic of Croatia, the ESMP Checklist is prepared with simplified content. It will envisage potential environmental and social impacts and give generic guidance and mitigation measures applicable for each location.

#### 3 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

From the implementation of the sub-project activities, potential risks and impacts are expected mainly during the operational phase (usage of the tents in crisis situations) due to generation of hazardous

waste – contaminated solid waste, textiles, and contaminated waste liquid. Some minor risks could be expected also in preparatory and dismantling phases.

Potential environmental and social risks during preparatory phase:

- no or difficult procurement of equipment (e.g., additional tanks for contaminated waste liquid)
- improper identification of employees which should be trained
- lack of training
- inadequate location for placing the tents (that require cutting trees and removing vegetation; that is too far away from the entrance of the hospital and consequently poses a risk for wider contamination of medical staff and patients within the hospital area; that is too far away from the electricity source).

Expected impacts are moderate in magnitude, site specific and easily managed by proper organization and monitoring.

Since the tents are inflatable mobile units that can be set up within 10 minutes, we do not expect any significant environmental and social risk during setting up. Potential risk only exists during the work of electrical air compressor if electric installations are not properly functional.

Potential environmental and social risks <u>during setting up the tents and operational phase</u> are mainly related to management of hazardous waste, while the others are minor and easily manageable. Potential risks are related to:

- Generation of different types of wastes, including medical waste, infectious waste, and hazardous waste
- Generation of contaminated waste liquid after decontamination
- Inadequate waste management facilities and processes for treatment of waste
- Improper waste transportation to and disposal in offsite treatment and disposal facilities
- Fire hazard due to inadequate use of electrical installation
- Labour management related to health and safety of workers
- Emergency events (Spillage; Occupational exposure to infectious disease; Accidental releases
  of infectious or hazardous substances to the environment and related risks for nearby
  community; Medical equipment failure; Failure of solid waste and wastewater treatment
  facilities; Fire)
  - Some of the 32 hospitals within which the tents will be placed might be protected as cultural heritage. Since no excessive set up is needed, we do not expect any damages during the set up. However, potential risk exists in case of fires which could cause damages on the buildings protected as cultural heritage. Risk is low.
  - The tents will be equipped with the decontamination liquid tank and tanks for storage
    of the contaminated waste liquid. There will not be any discharge to the ground nor
    to the surface waters. The possible risk for contamination of ground and surface
    waters exists only in case of emergency events and potential spillage of contaminated

liquids. While the chance of occurrence is low, the potential risk is assessed as moderate due to significance of potential impact.

Potential environmental and social risks during dismantling phase and storage:

- Generation of waste, medical waste, etc.
- Improper decontamination of the tents and associated equipment before storage.

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#### 4 ESMP CHECKLIST

#### 4.1 Purpose and Concept of the ESMP Checklist

The ESMP Checklist provides "pragmatic good practice" and it is designed to be user friendly and compatible with WB safeguard requirements. The checklist-type format attempts to cover typical mitigation approaches to common works with localized impacts.

This document will help assess potential environmental and social impacts associated with the proposed sub-project, identify potential environmental improvement opportunities, and recommend measures for the prevention, minimization and mitigation of adverse environmental and social impacts.

#### 4.2 Application of the ESMP Checklist

ESMP Checklist is a document prepared and owned by beneficiary – Ministry of Health of Republic of Croatia.

The ESMP checklist has one (1) introduction section and three (3) main parts:

**Introduction** or foreword part consisted of following sections:

- Introduction, in which characteristics of sub-project are described, Environmental and social
  category, as well as potential environmental and social impacts are defined, and concept and
  application of ESMP checklist are explained,
- Monitoring and reporting (brief description of the monitoring and reporting process including responsibilities of involved stakeholders)

The three main parts are included in Annex 1:

**Part 1** - constitutes a descriptive part ("site-passport") that describes the sub-project specifics in terms of physical location, the institutional and legislative aspects, the sub-project description, inclusive of the need for a capacity building program and description of the public consultation process.

**Part 2** - includes the environmental and social screening in a simple Yes/No format followed by mitigation measures for any given activity.

**Part 3** - is a monitoring plan for activities during sub-project implementation. It retains the same format required for standard World Bank ESMPs.

#### 5 MONITORING AND REPORTING

In the table part (Part 2 and Part 3) of the document clear mitigation and monitoring measures are explained in detail and will be included in the works contracts.

The mitigation measures include the general measures related to site organization and OHS, community safety, measures to prevent the risk of pollution of surface water/ground water/ soil due to spill leakage, the risk of damage to known/unknown historical buildings due to emergency events, the risk of cutting of trees in order to make space for the tents, as well as the risks related to generation of waste, including hazardous, medical and radioactive waste.

Monitoring of the proposed mitigation measures for environmental protection and OH&S will be performed by responsible person in each Health Care Facility (HCF). That person will be responsible

for supervising proper implementation of sub-project activities according to the Monitoring plan (part 3) and reporting the Ministry of Health on the results.

It is of outmost importance that each HCP appoint at least one responsible person immediately after tents are delivered. Ministry of Health should be notified on that. He/she will be responsible for all activities related to the maintenance of the tents, such as preparation and implementation of the Maintenance and Safety Inspection Plan, as well as the trainings of the technical staff.

The Maintenance and Safety Inspection Plan should include detail description of all activities and time plan that should be performed in order to ensure regular periodical checks of the tents and functionality of the machines, as well as readiness of the hospital technical staff and appointed external staff (eg firefighters) for the quick and appropriate response in the case of crisis.

Ministry of Health is obliged to prepare Infection Control and Waste Management Plan that should ensure adequate management of waste that may occur in the hospitals during decontamination and insulation, including hazardous waste, medical waste, radioactive waste and contaminated waste liquid generated during decontamination process. The responsible designated person of each HCF will be responsible for proper implementation of that plan and report to the Ministry of Health on the results.

## 6 ANNEX 1. ESMP CHECKLIST FOR THE PROCUREMENT AND USAGE OF DECONTAMINATION AND INSULATION TENTS

#### 6.1 Part 1. General project and site information

INICTITUTION AL O ACASS	NICTO ATIVE						
INSTITUTIONAL & ADMII							
Country	Croatia						
Project title	CROATIA EARTHQUAKE RECOVERY AND PUBLIC HEALTH PREPAREDNESS PROJECT (P173998)						
Scope of the sub- project and activity	Procurement and usage of decontamination and isolation tents						
Institutional arrangements (WB)	Zuzana Stanton-Gedd (Task Team Leader)	E	Environmental/Safeguards Specialists: Sanjay Agarwal Natalija Golubovac Ivana Ivicic				
Implementation arrangements (Borrower)	Safeguard/Environment Supervision Slavica Polimac, Project Environmental Focal Point at MoH		Works supervisor Head of technical department at the HCP		Inspectorate Supervision	Supplier	
SITE DESCRIPTION				•••••	1		
Name of site	A total of 37 medical decontamination and 37 medical insulation tents will be procured for 32 hospitals in the Republic of Croatia with Emergency department placed in 26 cities. The tents will be used only in crises situations.						
	County	No.	City Hospital				
	City of Zagreb	1.	Zagreb	Ur	University Hospital Centre ZAGREB		
		2.			University Hospital Centre "SESTRE MILOSRDNICE"		
		3.		Cli	Clinical hospital DUBRAVA		
		4.		Cli	Clinical hospital MERKUR		
		5.		Cli	Clinical hospital "SVETI DUH"		
		6.		- 1	University Hospital for Infectious Diseases "DR. FRAN MIHALJEVIĆ"		
		7.		Ch	Children hospital ZAGREB		
	County of	8.	Zabok	Ge	eneral Hospital ZAB	OK and Hospital	
	Krapina-Zagorje			of	Croatian Veterans		
	County of	9.	Varaždin		eneral Hospital VAR		
	Varaždin	10	. Čakovec		ounty Hospital ČAKC		
	County of	11	. Koprivnica	- 1	General Hospital "DR. TOMIS		
	Koprivnica-			BA	ARDEK" KOPRIVNIC <i>A</i>	A	
	Križevci						
	County of	12	. Bjelovar	Ge	eneral Hospital BJEL	OVAR	
	Bjelovar-						
	Bilogora		<u> </u>				
	County of	13	. Virovitica	Ge	eneral Hospital VIRC	OVITICA	
	Virovitica-						
	Podravina		D. *	+-			
		14	. Požega	Cc	ounty General Hospi	itai POZEGA	

	County of	15.	Pakrac	County General Hospital PAKRAC and		
	Požega-Slavonia			Hospital of Croatian Veterans		
	County of	16.	Slavonski	General Hospital "DR. JOSIP		
	Slavonski Brod-		Brod	BENČEVIĆ" SLAVONSKI BROD		
	Posavina	17.	Nova	General Hospital NOVA GRADIŠKA		
			Gradiška	· I		
	County of	18.	Vinkovci	County General Hospital VINKOVCI		
	Vukovar-	19.	Vukovar	National Memorial Hospital		
	Sirmium			VUKOVAR		
	County of	20.	Osijek	Clinical Hospital Centre OSIJEK		
	Osijek-Baranja	21.	Našice	County General Hospital NAŠICE		
	County of	22.	Karlovac	General Hospital KARLOVAC		
	Karlovac	23.	Ogulin	General Hospital and Homeland War		
				Veterans Hospital OGULIN		
	County of Sisak-	24.	Sisak	General Hospital "DR. IVO PEDIŠIĆ"		
	Moslavina			SISAK		
	County of	25.	Rijeka	Clinical Hospital Centre RIJEKA		
	Primorje-Gorski					
	kotar					
	County of Istria	26.	Pula	General Hospital PULA		
	County of Lika-	27.	Gospić	General Hospital GOSPIĆ		
	Senj					
	County of Zadar	28.	Zadar	General Hospital ZADAR		
	County of Šibenik-Knin	29.	Šibenik	General Hospital of COUNTY OF SIBENIK-KNIN		
		30.	Knin	General and Veteran Hospital "HRVATSKI PONOS" KNIN		
	County of Split- Dalmatia	31.	Split	University Hospital of SPLIT		
	County of Dubrovnik- Neretva	32.	Dubrovnik	General Hospital DUBROVNIK		
Describe site location	built-up parts of the	e buildii ntrance	ng part of settle of the hospita	als' premises, which are located in the ements. The tents are planned to be ls. While not in function, they will be als' premises.		
Who owns the land?	The Republic of Cro	atia, co	unties			
Valid operating permit, licenses, approvals etc.	NA					
LEGISLATION						
Identify national &local legislation & permits that apply to subproject activity(s)	<ul> <li>Environment and Nature</li> <li>Environmental Protection Act (OG 80/13, 153/13, 78/15, 12/18, 118/18),</li> <li>Nature Protection Act (OG 80/13, 15/18, 14/19,127/19),</li> <li>Regulation on the ecological network and the competencies of public</li> </ul>					
	<ul> <li>institutions for the management of ecological network areas (OG 80/19),</li> <li>Ordinance on conservation objectives and conservation measures for targ bird species in ecological network areas (OG 25/20, 38/20),</li> </ul>					
	-	_		and habitat map (OG 27/21),		
	5. amance on th					

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#### **Occupational and Community Health and Safety**

- Occupational Safety and Health Act (OG 71/14, 118/14, 94/18, 96 / 18),
- Ordinance on the use of Personal Protective Equipment (OG 5/21),

#### **Labor and Gender Equality**

- Labor Act (OG 93/14, 127/17, 98/19),
- Gender Equality Act (OG 82/08, 69/17),
- Anti-discrimination act (OG 85/08, 112/12),

#### **Waste Management**

- Waste Management Act (OG 84/21), Ordinance on waste management (OG 81/20),
- Ordinance on the waste catalogue (OG 90/15),
- Regulation on medical waste management (OG 50/15, 56/19),

#### **Radiological and Nuclear Safety**

- Act on radiological and nuclear safety (OG 141/13, 39/15, 130/17, 118/18),
- Ordinance on measures for protection against ionizing radiation and intervention in the event of an emergency (OG 102/12),
- Regulation on disposal of radioactive waste and used sources (OG 12/18),
- Regulation on the manner of removing radioactive pollution, disposal of the radioactive source, or taking all other necessary measures to reduce damage to humans and the environment or to removal of further risks, dangers, or damages (OG 53/08),

#### **Cultural Heritage**

Act on the Protection and Preservation of Cultural Property (OG 69/99, 151/03, 157/03, 100/04, 87/09, 88/10, 61/11, 25/12, 136/12, 157/13, 152/14, 98/15, 44/17, 90/18, 32/20, 62/20),

#### **Stakeholder Engagement**

• Regulation on information and participation of the public and public concerned in environmental matters (OG 64/08).

#### Other

• Act on the Transport of Dangerous Goods (OG 79/07)

#### **PUBLIC CONSULTATION**

Identify when / where the public consultation process took place and what were the remarks from the consulted stakeholders The draft Environmental and Social Management Plan (ESMP) Checklist (for the projects with moderate risk) will be available for the public for 14 days on web sites of the Ministry of Health and Croatian Institute of Emergency Medicine. Hard copies will be available in MoPPCSA and MoH. All relevant comments and suggestions received by the stakeholders will be included into the final ESMP checklist and will be submitted to the PIU for the approval by the Environmental Specialist and World Bank Specialist.

Approved Final version of ESMP Checklist will constitute an integral part of bidding and contracting documentation for contractors.

#### **INSTITUTIONAL CAPACITY BUILDING**

Will there be any capacity building?

#### [] N or [X]Y

The contractor is obliged to hold a minimum of one training for a minimum of 10 employees of each of 32 end-users (hospitals) in order to get acquainted with the

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operation of the device. Training should be conducted in the premises of end-
users before handover and a record should be made of the same

#### **ATTACHMENTS**

Attachment 1: Map of locations of hospitals in the Republic of Croatia with Emergency department which are the end-users of medical tents (source: Google Map)

Attachment 2: Classification of waste which may occur in the hospitals during decontamination and insulation - not an exhaustive list

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#### 6.2 Part 2. Environmental and Social Screening

PART 2: ENVIRONMEN	NTAL /SOCIAL SCREENING		
Will the site activity	Activity	Status	Additional references
include / involve any of the following	A. General conditions and social risk management		See Section <b>A</b>
potential issues / risks:	B. Activities related to setting up the tents and operational phase (use of		
HSKS.	decontamination and insulation medical tents)	[X] Yes [ ] No	If "Yes", See Section A, B, F below
	Risk of pollution of surface water/ground water/ soil due to spill leakage		
	C. Cultural and historical heritage	[X] Yes [ ] No	If "Yes", See Section C below
	Risk of damage to known/unknown historical buildings due to emergency	[X] 163 [ ] NO	ii res , see section c below
	events		
	D. Biodiversity	[X] Yes [ ] No	If "Yes", See Section D below
	<ul> <li>Risk of cutting of trees in order to make space for the tents</li> </ul>		
	E. Waste generation and management		
	<ul> <li>Generation of waste, including medical waste and other hazardous waste, as well as radioactive waste (potential waste that may occur in the</li> </ul>		
	hospitals during decontamination and insulation is shown in Attachment 2)	[X] Yes [ ] No	If "Yes", See Section E below
	<ul> <li>Generation of contaminated waste liquid after decontamination process and temporary storage</li> </ul>		
	Transportation of waste and contaminated waste liquid generated during		
	decontamination process  F. Traffic disturbance		
	1. Hame disturbance		
	Site specific vehicular traffic	[ ] Yes [X] No	If "Yes", See Section A, B, F below
	<ul> <li>Site is in a populated area (but within the boundaries of each HCF (hospital))</li> </ul>		

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#### **Mitigation measures**

- A. General conditions and social risk management
- B. Activities related to setting up the tents and operational phase (usage of decontamination and insulation medical tents)
- C. Cultural and historical heritage
- D. Biodiversity
- E. Waste generation and management

Table 2. Environmental and social mitigation measures

Parameter	Mitigation measures checklist
	A General conditions and social risk management
Site	Site organization
organization,	a) all work is carried out in a safe and disciplined manner designed to minimize impacts on neighbouring residents and environment,
Occupational	b) the surrounding area near the tents will be kept clean,
Health safety	Occupational Health and Safety
(ALL PHASES)	c) mandatory use of protective equipment, workers' personal protective equipment (PPE) and safety procedures comply with legislation and international good practice as well as ICMWMP,
	d) appropriate informative and warning signposting of the sites inform workers of key rules and regulations to follow,
	e) entry for unemployed person within the sub-project location is prohibited (within the warning tapes and fences when/where deem needed),
	f) Maintenance and Safety Inspection Plan for the tents should be prepared for each Health Care Facility (HCF) and one responsible person in each HCF should be appointed to take care of its implementation and reporting to the Ministry of Health
	g) tents and machines (electric air compressors, decontamination and waste pumps, etc.) are handled only by experienced and appropriately trained personnel, thus reducing the risk of accidents,
	h) devices, equipment and fire extinguishers are always functional, and placed in vicinity of the tents so in case of need they could be used rapidly and efficiently.
	i) first aid kits are available on the site and personnel trained to use it,
	j) hospital technical staff as well as firefighters designated to handle the tents are properly trained for the positions and work performed
	k) procedures for cases of emergency (including spills, accidents, etc.) are available at the site,
	I) provide adequate lavatory facilities (toilets and washing areas) in the vicinity of the tents with adequate supplies of hot and cold running water, soap, and hand drying devices,
	m) purchased equipment installed and used respecting all safety measures prescribed by the producer of equipment and best practices,

Mitigation measures checklist
n) In addition to the World Bank Group EHS Guidelines, follow internal protocols for proper handling and storage of samples, reagents, pharmaceuticals, and medical supplies. Materials and chemicals must be handled by professionally trained persons according to Material Safety Data Sheet.
o) Fire extinguishers will be available within the 30m range from the tents. If this is not the case, tents will be equipped with fire extinguishers.
p) Only equipment envisaged in the technical specifications will be installed and used in the tents, no other (e.g. cell-phone chargers, etc.)
q) No significant earthworks will take place.
r) In case crisis situation coincides with the COVID-19 epidemic:
<ul> <li>ensure suitable arrangements for all necessary welfare and hygiene requirements and for the prevention of COVID-19 epidemics (regular delivery PPEs, ensure protocols for regular disinfection of rooms, equipment, tools, are in place and followed, ensure handwashing and other sanitary stations are always supplied with clean water, soap, and disinfectant, etc)</li> <li>in accordance with the epidemiological situation in the country, it is necessary to follow the WHO (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public) recommendations and the recommendations at the official Government website for accurate and verified information on COVID19 (https://koronavirus.hr/en)</li> </ul>
B Activities related to setting up and usage of decontamination and insulation medical tents
a) Responsible handling of the contaminated waste liquid after decontamination process,
b) Handle all materials in accordance with instructions included in Material safety data sheets (MSDS) which have to be available at the
site and communicated to staff,
c) In the case of an accident, any hazardous liquid removed from the soil using adsorption materials such as sand, sawdust or mineral
adsorbents. Such waste material must be collected in tanks, stored in the space provided for hazardous waste storage and hand over to authorized companies,
d) Prevent hazardous spillage coming from tanks. Liquids will be kept in leek-proof containers e.g. double-wall containers or containers with a chemical bund over 110% container's capacity.
a) The tanks with contaminated waste liquid after decontamination process must be kept in a leak-proof room/place to prevent spillage and leaking.
b) The tanks with contaminated waste liquid after decontamination process must be kept closed. They must not be handled, opened, or
stored in a manner that may cause them to leak.
c) Hazardous waste storage must be designated prior to the use of tents. It must be locked and accessible only to authorised personnel.
C Cultural and historical heritage
a) Tents should be kept at an optimal distance from the building;
b) Approval will be obtained from the CH competent authority before the installation of tents (ideally, this is done upon delivery of tents

Parameter	Mitigation measures checklist
	to HCP);
	c) Tent and the related infrastructure should be installed in a way that does not damage the protected building.
	d) In the unlikely case of chance findings, installation works will be stopped, and competent authorities notified. Works will recommence
	upon their approval.  D Biodiversity and nature protection
Biodiversity	a) During the preparatory phase, plan the location for the tents aiming to avoid, where possible, cutting of trees and other natural
(PREPARATORY	vegetation. If removal of trees is necessary, that can be done only with approval of the competent authorities (e.g. County Office for
PHASE)	Environmental Protection, Croatian Forests, as applicable);
FIIASL)	b) If deem needed, for the restoration of the removed natural vegetation cover, use only autochthonous plant species that occur in the
	vegetation communities present in the wider area of the sub-project,
	c) Discarding any type of waste to nature or water bodies is strictly prohibited.
	E Waste generation and management
Waste	a) Temporarily storage on site of all hazardous or toxic substances (including wastes) must be in safe containers labeled with details
management	of composition, properties and handling information. Chemicals and medical waste are managed, used and disposed, and
(OPERATIONAL	precautionary measures taken as required in the Material Safety Data Sheets (MSDS). Containers must be located at the solid
PHASE)	surface foreseen for that purpose on the site within the hospital area,
	b) Transportation of hazardous substances (infective, radioactive, etc.) and waste conduct in line with Act on the Transport of
	Dangerous Goods (OG 79/07) and other relevant national legislation and World Bank standards, only by licensed companies and
	only to licensed processing plants/landfills;
	c) Records of waste streams and amounts must be kept for each type of generated waste at the location
	d) This is the obligation of each health care facility according to the medical waste management plans,
	e) All waste must be handed over with appropriate documentation to the companies authorized for the waste management
	(companies that have adequate waste permit),
	f) In the case of hazardous waste, including the contaminated waste liquid generated during decontamination process, information
	on handing over waste to the final destination must be obtained,
	g) Whenever feasible the contractor should reuse and recycle appropriate and viable materials,
	h) Burning or illegal dumping of waste is strictly prohibited. All wastes can be collected and processed/landfilled only by licensed
	companies for the particular type of waste they are collecting or landfilling/processing,
	i) For management of infectious wastes and disease control, Infection Control and Waste Management Plan (ICWMP), satisfactory
	to WB should be prepared and implemented accordingly within 3 months from delivery of goods (tents), but before use of tents.
	j) The safe health-care waste management will be applied for the Infectious waste (hazardous health-care waste) according to the
	national legislation, and WHO recommendations, WB Environmental Health and Safety Guidelines (EHSG) and ICMWMPs, stricter
	one prevailing.
	k) After the usage of the tents, they must be dismantled and stored in safely manner; tents must be decontaminated before

Parameter	Mitigation measures checklist
	dismantling and storing; all generated waste should be properly managed; all medical equipment must be decommissioned as per the manufactures requirements and disposed where relevant in accordance with the manufacturer's requirements.  I) In case crisis situation coincide with the COVID-19 epidemic:
	<ul> <li>Waste segregation, packaging, collection, storage disposal, and transport is conducted in compliance with the prepared ICWMP for each HCF and WHO COVID-19 Guidelines;</li> </ul>
	<ul> <li>Where cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, provide appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, provide best available alternatives;</li> </ul>
	<ul> <li>Provide compliance with the precaution measures for infection prevention and control in isolation and treatment of infected cases spreads COVID-19 infections in HCFs.</li> </ul>
	F Accidents/Incidents
All phases	a) In the case of significant accident/incident (fatality, serious injury, larger spilling, fire, and similar) the MoH Focal point and PIU must be notified within 24 hours.

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#### 6.3 Part 3. Monitoring Plan

What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Cost (if not included in project budget)	Who (Is responsible for monitoring?)					
	PREPARATORY PHASE / STORAGE										
Accident's prevention	On the site of each hospital	By checking if there are spill kits, firefighting appliances, and equipment is in working condition at the sub-project location	Once, before setting up the tents	To prevent accidents	Health care facility (each hospital for its own area)	Responsible person within the technical staff of each HCF should conduct monitoring and notify the Ministry of Health on the results					
Tents and associated equipment	At the premises of the certified company	By preparing Maintenance and Safety Inspection Plan for the tents By checking if materials are in adequate condition (eg, it is not destroyed, torn, etc.)	Maintenance and Safety Inspection Plan for the tents should be prepared within the timeframe of one (1) month after delivering the tents.	To check the functionality of the tents	Health care facility (each hospital for its own area)	Responsible person within the technical staff of each HCF should conduct monitoring and notify the Ministry of Health on the results					
		By checking functionality of machines (electric air compressor, decontamination and	Periodically, according to the technical specifications								

What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Cost (if not included in project budget)	Who (Is responsible for monitoring?)
		waste pumps, ventilation, etc.)				
Readiness of the hospital technical staff and appointed external staff (eg firefighters) for the quick and appropriate response in the case of crisis	On the site of each hospital	By providing trainings of the hospital technical staff and external staff in order to get acquainted with the operation of the device.	The contractor (supplier) is obliged to hold a minimum of one training for a minimum of 10 employees of each end-user (hospital) in order to get acquainted with the operation of the device. Training should be conducted in the premises of end-users (hospital) before handover and a record should be made of the same Following trainings - according to the Maintenance and Safety Inspection Plan	To check the readiness of the hospital technical staff and appointed external staff (eg firefighters) for the quick and appropriate response in the case of crisis	First training is included in the project budget  Every followed training cost should be covered by health care facility (each hospital for its own area)	Responsible person within the technical staff of each HCF should conduct monitoring and notify the Ministry of Health on the results

What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Cost (if not included in project budget)	Who (Is responsible for monitoring?)
Infection Control and Waste Management Plan (ICWMP) (including management of contaminated waste liquid)	On site visual assessment and checks of the documentation	By preparing ICWMP which will cover overview of infection control and waste management in the HCF, management measures, OHS, infection control measures, finance and resources, and monitoring and reporting plan	Within one (1) year after delivery of the tents, but before the usage of the tents	To ensure adequate management of waste, and hazardous waste, including medical waste, radioactive waste and contaminated waste liquid generated during decontamination process	Included in the project budget	Ministry of Health
		SETTING UP AND THE	TENTS / OPERATIONAL /	DISMANTLING PHASE		
Toxic / hazardous materials management and Hazardous waste management	On site visual assessment (hazardous waste containers and documentation; tanks with contaminated waste liquid after decontamination process)	<ul> <li>Proper handling and storage are checked according to Material Safety Data Sheets (MSDS)</li> <li>Visual inspection and review of documents in terms of:</li> </ul>	Continuously, when the remains are removed	To ensure adequate management of waste, and hazardous waste, including medical waste and contaminated waste liquid after decontamination process	Hospital budget	Responsible person within the technical staff of each HCF should conduct monitoring and notify the Ministry of Health on the results

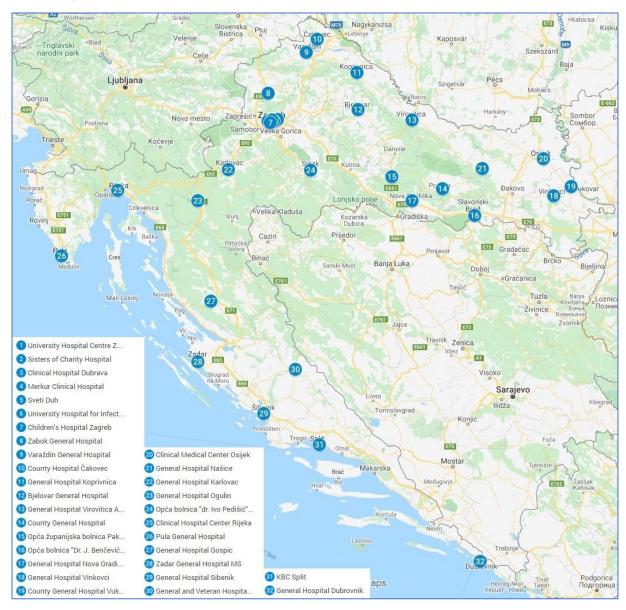
What	Where	How	When	Why	Cost	Who
(Is the parameter to be monitored?)			(Is the parameter being monitored?)	(if not included in project budget)	(Is responsible for monitoring?)	
		- Adequate collection and storage of hazardous and toxic substances (including contaminated waste liquid after decontaminati on process) and waste - Transportation of hazardous waste only by authorized companies.				
Radioactive materials management and Radioactive waste management (in case of nuclear hazards)	On site visual assessment (radioactive waste containers and documentation; tanks with contaminated waste liquid after decontamination	<ul> <li>Proper handling and storage are checked according to the national legislation</li> <li>Visual inspection and review of</li> </ul>	Continuously, when the remains are removed	To ensure adequate management of radioactive waste, including contaminated waste liquid after decontamination process – in case of nuclear hazards	Hospital budget	Responsible person within the technical staff of each HCF should conduct monitoring and notify the Ministry of Health on the results

What	Where	How	When	Why	Cost	Who (Is responsible for monitoring?)	
(Is the parameter to be monitored?)	(Is the parameter to be monitored?)	(Is the parameter to be monitored?)	(Define the frequency / or continuous?)	(Is the parameter being monitored?)	(if not included in project budget)		
	process – in case of nuclear hazards)	documents in terms of:  - Adequate collection and storage of radioactive waste (including contaminated waste liquid after decontaminati on process – in case of nuclear hazards)  - Transportation of radioactive waste only by authorized companies.					

#### 6.4 Minutes of public consultations

This section will be prepared after public consultations.

# 6.5 Attachment 1: Map of locations of hospitals in the Republic of Croatia with Emergency department which are the end-users of medical tents (source: Google Map)



## 6.6 Attachment 2: Classification of waste which may occur in the hospitals during decontamination and insulation - not an exhaustive list

Risk category	General description of waste belonging to the particular risk	Groups of waste	Applies to	Possible waste code from the Waste Catalogue <sup>2</sup>	Classification according to the Ordinance on waste management <sup>3</sup> (hazardous /non- hazardous)	Required treatment operation
A. Non-risk	Waste that has not been in contact with	A1. Recyclable waste	Paper and cardboard	15 01 01, 20 01 01	Non- hazardous/Hazardous or radioactive if contaminated	Recycling/ Treatment as a hazardous or radioactive waste if contaminated
	infectious agents, hazardous chemicals, or radioactive substances, and that does not pose a hazard. In most cases it is similar to household waste (general office waste, packaging or food leftover, electrical and electronic		Plastic (PET water and soft drink bottles, milk containers etc.)	15 01 02, 20 01 39	Non- hazardous/Hazardous or radioactive if contaminated	Recycling/ Treatment as a hazardous or radioactive waste if contaminated
			Metal (aluminium beverage cans, aluminium containers, food tin cans, metal containers etc.)	15 01 04, 20 01 40	Non- hazardous/Hazardous or radioactive if contaminated	Recycling/ Treatment as a hazardous or radioactive waste if contaminated
			Glass (glass bottle etc.)	15 01 07, 20 01 02	Non- hazardous/Hazardous or radioactive if contaminated	Recycling/ Treatment as a hazardous or radioactive waste if contaminated
		office waste, packaging or food leftover, electrical and	<b>Textile</b> (cloths, footwear etc.)	20 03 07, 20 01 10, 20 01 11	Non- hazardous/Hazardous or radioactive if contaminated	Recycling/ Treatment as a hazardous or radioactive waste if contaminated
	electronic		Electrical and electronic	20 01 35*, 20 01	Non-	Recycling/ Treatment as a

<sup>&</sup>lt;sup>2</sup> Ordinance on the waste catalogue (OG 90/15)

<sup>&</sup>lt;sup>3</sup> OG 81/20

Risk category	General description of waste belonging to the particular risk	Groups of waste	Applies to	Possible waste code from the Waste Catalogue <sup>2</sup>	Classification according to the Ordinance on waste management <sup>3</sup> (hazardous /non- hazardous)	Required treatment operation
	equipment). Represents between 75% and 90% of the total amount of waste generated by healthcare institutions.  A2.		equipment that has not been in contact with infectious agents, hazardous chemicals, or radioactive substances (hospital electrical equipment, fluorescent tubes and other mercury containing waste etc.)	36, 16 02 13, 16 02 14*, 20 01 21*	hazardous/Hazardous	hazardous or radioactive waste if contaminated
		A2. Compostable waste	Food waste (leftover)	20 01 08	Non- hazardous/Hazardous or radioactive if contaminated	Composting / anaerobic digestion/ Treatment as a hazardous or radioactive waste if contaminated
		A3. Other non-risk waste	All the non-risk waste that do not belong to above mentioned two categories (eg mixed municipal waste, PEE (masks, gloves) from waiting rooms etc.)	20 03 01, 19 08 05, 19 08 09, 20 03 07 and other appropriate waste codes from Waste Catalogue (mostly from sub-group 15 01 and group 20 of waste catalogue) related to waste that has not been in contact with infectious agents, hazardous chemicals, or	Non-hazardous/Hazardous or radioactive if contaminated	Priority must be given to reuse/ recycling / recovery process. If it isn't applicable, disposal operation is unavoidable. / Treatment as a hazardous or radioactive waste if contaminated

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Risk category	General description of waste belonging to the particular risk	Groups of waste	Applies to	Possible waste code from the Waste Catalogue <sup>2</sup>	Classification according to the Ordinance on waste management <sup>3</sup> (hazardous /non- hazardous)	Required treatment operation
				radioactive substances.		
B. Biological (infectious) risks	wastes that are suspected to contain pathogens (or their toxins) in sufficient concentration to cause diseases to a potential host after	B1. Sharps waste	Syringes, needles, disposable scalpels and blades	18 01 01	Hazardous	Physical procedures of dry or steam sterilization, and in the absence of a device, other procedures can be applied to achieve the removal of microorganisms./Desinfection
		concentration to cause diseases to a potential host	B2. Infectious waste	Waste contaminated with blood, infectious agents, personal protective equipment (PPE), or waste from patients with infections	18 01 03*	Hazardous
C. Chemical risks		C3. Chemical waste	, Disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers), and batteries	18 01 06*, 18 01 07	Hazardous	Incineration (D10) / Energy recovery (R1)
	and experimental work and from cleaning	C4. Radioactive waste	Cloths, footwear and PPE contaminated by radioactive substances	Radioactive waste falls under the scope of the	Not applicable with regard to the Act on Waste	Since it is about low radioactive waste <sup>5</sup> , required treatment process is storage

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<sup>&</sup>lt;sup>5</sup> http://www.nemis.hr/index.php/radioaktivni-otpad/upravljanje-nisko-i-srednje-radioaktivnim-otpadom.html

Risk category	General description of waste belonging to the particular risk	Groups of waste	Applies to	Possible waste code from the Waste Catalogue <sup>2</sup>	Classification according to the Ordinance on waste management <sup>3</sup> (hazardous /non- hazardous)	Required treatment operation
	and disinfection.		Contaminated waste liquid generated after decontamination process (in case of nuclear crisis)	Act on radiological and nuclear safety <sup>4</sup> but not under the waste legislation.  Therefore, it cannot be classified by any waste code.	Management and its bylaws  .  According to the Ordinance on disposal of radioactive waste and used sources, radioactive waste is classified as: Exempt waste, Very shortlived waste, Very low level waste, Low level waste, Intermediate level waste, and High level waste	in a specially designed building with appropriate characteristics and then disposal in a surface or underground landfill <sup>6</sup> .

<sup>&</sup>lt;sup>4</sup> OG 141/13, 39/15, 130/17, 118/18

<sup>&</sup>lt;sup>6</sup> Ordinance on disposal of radioactive waste and used sources (OG 12/18) (http://www.propisi.hr/print.php?id=7985)