REPUBLIC OF LEBANON
MINISTRY OF ENVIRONMENT

Inter-Agency Coordination Lebanon

Solid Waste Management and COVID-19

19 August 2020

Agenda

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1. Healthcare Waste Sector Background

2. General Guidelines for Municipal Solid Waste Management Under Risks of Covid-19 Outbreak: Collection, Sorting, Treatment and Sanitary Landfilling

3. UNDP Intervention

4. General Discussion and Next Steps

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Background Information

Year	LAW / DECREE/DECISION	RELEVANCE
2019	CoM Decree 5606	Sets the framework for the management of hazardous waste which include wastes resulting from healthcare practices (excluding infectious waste)
2019	MoE Decision 59/1	Sets the licensing, registration procedures and obligations of hazardous waste storage facilities at the MoE (with expectations: radioactive waste, hazardous and infectious waste resulting from health institutions to where provisions apply)
2019	MoE Decision 998/1	Sets the registration procedure and obligations of hazardous waste generators at the MoE
2019	MoE Decision 999/1	Sets the licensing, registration procedures and obligations of hazardous waste tansporter
2018	MoE Decision 1294/1	Environmental conditions for the transport of infectious waste
2018	Law 80	Integrated Solid Waste Management Law. It sets the framework for Integrated Solid Waste Management based on the principles of Law 444/2002. The law includes the following: • Article 4: Priorities of integrated solid waste management (considers the principle of preventive action and minimizing solid waste generation as a priority) • Article 7: Preventing random disposal, open dumping and burning of solid waste • Article 8: The "Polluter Pays Principle" • Article 16: Responsibility of the producer

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Background Information

Year	LAW / DECREE/DECISION	RELEVANCE
2017	MoE Decision 1295/1	Environmental guidelines for the establishment and operation of sterilization facilities for the treatment of infectious waste
2012	Decree 8633 (EIA Decree)	Sets the EIA Procedures. It is under the Framework of the Environmental Law. It stipulates the EIA procedures and regulations related to all development Projects that have a potential impact on the environment. An EIA study will likely be needed if an additional component (e.g. an autoclave unit) is to be added to AMWTF – (or any others required study IEE, Audit, etc.)
2011	MoE Circular 11/1	Template for the trimestral report to be submitted by licensed health care waste treatment facilities to the MoE
2004	Decree 13389	Defines and Classifies the Types of Health Care Institution Wastes and their Methods of Disposal
2002	Law 444	Sets the framework for environmental protection. Provides the rules to the protect different environmental matrices (air, water, soil, etc.) from pollution with wastewater, hazardous wastes, chemicals, and noise, etc.; and specifies the penalties for violating environmental laws
2001	MoE Decision 8/1	Updates/replaces Decision 52/1 by developing National Standards for Environmental Quality (NSEQ) related to air pollutants and liquid waste emitted from classified establishment and wastewater treatment plants into receiving water bodies
1996	MoE Decision 52/1	Specifying the National Standards for Environmental Quality and the Environmental Limit Values for air, water, and noise

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Background Information

Specification of the Types of Healthcare Wastes and their Disposal Methods

Decree 13389 issued in 18/9/2004

Amendment of the Decree 8006 Dated to 11/06/2002
(*Specification of the Types of Healthcare Wastes and their Disposal Methods***)**

Objectives and Scope

The aim of this Decree is to regulate the management of healthcare waste defined for the protection of environmental health and the care for public interest. Healthcare waste should be managed in a way to reduce the health risks and encourage waste minimization, reuse, recycling and recovery, and organize collection, transport and disposal within a sound environmental management program.

The decree includes but is not limited to the definitions of the different type of waste, the responsibilities, segregation, collection, transportation processes, etc.

1. Healthcare Waste Sector Background

Sector Information

Today, some hospitals treat their waste in-house while others outsource this process. There are two organizations that treat medical waste in Lebanon

Arcenciel (local NGO)

- 80% of the treated medical waste in Lebanon

But currently, they are treating around 6 T/day

23t/d in 3 main centers (the maximum capacity they could reach if full capacity and non-stop): located in Jisr el Wati (Beirut), Zahleh (Bekaa), and Saida. Arcenciel was operating 2 more facilities in Zgharta and Hotel Dieu de France (private hospital) but are currently non-operational

Safe (local NGO)

- was responsible for the only existing waste treatment facility in the southern district of Tyre (specifically in Abbasiyeh)

MW Treatment Facility in Abbasiyeh consists of an autoclave for treating around 900 Kg/day of infectious waste generated by the main hospitals and laboratories in Tyre Caza in addition to hospitals from Nabatiyeh, Tebnine, and occasionally from Assayran and Bint Jbeil (South Lebanon). Currently operated by the Municipality

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Sector Information

Pre-Feasibility study done by the MoE (at end of 2019) funded by EBRD

Total quantity 7500-8000t/y

Treated approximately 6000t/y

Amount of infectious waste not being treated: 1,500 t/year

2. General Guidelines for Municipal Solid Waste Management Under Risks of Covid-19 Outbreak: Collection, Sorting, Treatment and Sanitary Landfilling

General Conditions

- It is recommended to abide by the hygiene, cleanliness, disinfection, hands cleaning, and other relevant preventive instructions issued by the Ministry of Public Health
- The Ministry of Environment advises all stakeholders to follow these guidelines as additional preventive measures, if and where needed

2. General Guidelines for Municipal Solid Waste Management Under Risks of Covid-19 Outbreak: Collection, Sorting, Treatment and Sanitary Landfilling

General Conditions

The operation and management of municipal solid waste (MSW) must continue (including collection & sweeping, sorting, treatment, and final disposal) based on the provisions set out in the Lebanese legislation and contractual procedures.

- ✓ Additionally, vehicles/trucks shall be equipped with disinfectants /sanitizers
- ✓ Stop using electronic devices for personnel registration or door access that require physical/touch contact (for finger printing or to punch security codes or other) and replace those with alternative methods that do not require physical/touch contact
- ✓ Grant access only to essential personnel and people of relevance
- ✓ Prevent employees with sickness symptoms from working and ask them to immediately seek medical support
- ✓ Disinfectants to be used should be compliant with the specifications and standards set by the Coronavirus Preventive Measures Follow-up Committee (CPMFC)

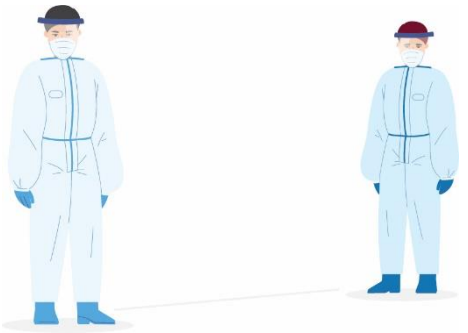
2. General Guidelines for Municipal Solid Waste Management Under Risks of Covid-19 Outbreak: Collection, Sorting, Treatment and Sanitary Landfilling

Personal Protective Gear (PPG) for Municipal Solid Waste Field Personnel

- ✓ Provide comprehensive **personal protective gear (PPG) that covers the entire skin** of personnel with his/her name on it. The PPG comprises of long-sleeve puncture resistant overhaul, surgical mask, face shield, anti-puncture gloves that are liquid resistant, and hard toe shoes
- ✓ Wear **disposable gloves** under the anti-puncture gloves
- ✓ Personnel should **wash their hands** with water and soap for at least **30 seconds** before putting their PPG and after removing them
- ✓ Personnel should wear **disposable gloves and face masks** before leaving the facilities
- ✓ Ensure **social distancing** of at least 2 meters between the personnel while dressing/undressing
- ✓ Dispose of single-use PPGs in sealed bags and place them in a well-sealed second bag (marked with the Letter “C”) before disposal.

2. General Guidelines for Municipal Solid Waste Management Under Risks of Covid-19 Outbreak: Collection, Sorting, Treatment and Sanitary Landfilling

Collection of Municipal Solid Waste



- ✓ Reduce the work team to a **minimum number** without negatively impacting the ability to effectively collect waste and ensure public cleanliness

- ✓ Establish **exclusive teams** without changing any of the team members and limit the use of each waste collection vehicle to a single exclusive driver and team of workers

- ✓ **Disinfect** vehicles (and cab), the collection bins after emptying them and the waste vehicle facilities daily
- ✓ **the cab shall be disinfected either in the evening or at least **12 hours** before using it*

- ✓ **Limit contact** between the waste collectors and household residents by putting a schedule whereby residents should place their waste bags outside their doors at a designated time

2. General Guidelines for Municipal Solid Waste Management Under Risks of Covid-19 Outbreak: Collection, Sorting, Treatment and Sanitary Landfilling

Municipal Solid Waste Treatment Facilities

- ✓ Limit the number of personnel in facilities and at the manual sorting station without compromising on work functionality; ensuring a minimum distance of 2 meters between one another
- ✓ CLEAN AND DISINFECT FACILITIES Equipment, tools, materials, sorting station and worker areas should be cleaned and disinfected before and after working hours, and during shift breaks
- ✓ Categorize the waste according to date of sorting and type; sorted and treated waste material should be retained in the facility for 9 days before handing over
- ✓ In case of maintenance works, ensure proper clean up and disinfection afterwards

2. General Guidelines for Municipal Solid Waste Management Under Risks of Covid-19 Outbreak: Collection, Sorting, Treatment and Sanitary Landfilling

Offices and Control Rooms of Municipal Solid Waste Collection, Sorting, Treatment and Landfill Facilities

- ✓ Clean the offices on a regular basis using one of the disinfectants certified by the Coronavirus Preventive Measures Follow-up Committee (CPMFC)
- ✓ Place hand sanitizer near the entrance of each room in the building and put liquid soap and disposable paper towels in te washrooms
- ✓ Promote working from home for personnel whose jobs can be done remotely
- ✓ Limit interaction between employees and maintain social distancing (at least 2 m from one another)

3. UNDP Intervention

Supporting the MoE in the Development of the Guidelines

Technical Support: 2 main Interventions

- Abbassiyeh Medical Waste Treatment Facility
- Arcenciel Potential Support

potentially upscaling infectious waste treatment facilities

Development of Awareness and training Material for Solid Waste Management during COVID-19 outbreak

Closing the waste cycle by ensuring safe disposal sites for infectious waste

4. General Discussion and Next Steps

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