

Policy Summary on Integrated Solid Waste Management
as approved by the Council of Ministers in its meeting of January 11, 2018

Present State of the Solid Waste Management Sector in Lebanon:

Lebanon currently produces about 6,500 tons of municipal solid waste (MSW) per day, composed of about 52.5% organic matter; 36.5% paper, cardboard, plastic, metal and glass; and 11% inert and other materials. Waste is currently disposed of as follows: about 50% in uncontrolled dumpsites (about 940 dumpsites); about 35% in sanitary landfills (Bourj Hammoud, Ghadir River estuary, and Zahle); and the remaining waste (about 15%) undergo material recovery, sorted into recyclable or re-useable materials (paper and cardboard, plastic, metal, glass, etc.) or converted into organic soil enhancer/fertilizers in approximately 50 facilities across the Lebanese territories. Despite its importance in reducing landfilling, energy recovery is practically not carried out in these existing facilities, with the exception of two or three facilities.

In addition to MSW, Lebanon produces about 50,000 tons of hazardous solid waste each year: hazardous industrial chemical waste; electronic waste; expired solid drugs and materials; healthcare waste (hazardous non-infectious waste, waste requiring special management, hazardous infectious waste, etc.); used oil; used tires; used batteries; persistent organic pollutants from the energy sector or other sectors; various types of sludge, etc. In addition, there are other wastes such as solid waste from the olive oil industry, slaughterhouse waste, construction and demolition waste, bulky refuse/waste (some of which is currently dumped in the Bsalim landfill), etc. Environmentally sound treatment of hazardous solid waste and other waste is also non-existent, as most are disposed in a haphazard manner, with the exception of a portion of healthcare hazardous infectious waste that is treated in accordance with the provisions of Decree 13389/2004, and some types of hazardous waste that are exported in accordance with the provisions of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Law 389/1994).

1. Policy Principles:

The Policy is founded on the following eight principles:

1. Respect for the principles stipulated in the Environmental Protection Law No. 444/2002, especially its environmental principles (precaution, and protection and preservation of biodiversity; avoidance of depletion of natural resources; pollution control; and environmental impact assessment), economic principles (the polluter pays principle and adoption of economic incentives), social principles (the importance of customary norms in the rural milieu in the absence of statutes), and governance principles (cooperation and partnership), with a view to protecting the environment and thus preserving public health.
2. Recovery of as much waste as possible (material recovery and energy recovery) by adopting the integrated solid waste management hierarchy¹ towards a circular economy to achieve the following objectives:
 - a. Years 2019-2024: 25% material recovery, 35% energy recovery and 40% sanitary landfilling;
 - b. Years 2025-2035: 35% material recovery, 50% energy recovery and 15% sanitary landfilling.
3. Respect for the jurisdictions of the Ministry of Environment in solid waste management, while reinforcing the policy of cooperation with the other relevant ministries and public departments, and cooperation with municipalities and local communities. To this end, enhancing staffing in the Ministry of Environment by filling vacancies, including in the Environmental Police (about 60%) and adjusting staffing as necessary, and gradually increasing the Ministry's budget.
4. Adoption of administrative decentralization in waste management, in accordance with the conditions set by the laws and regulations, by devolving to the municipalities the first stages of the waste management hierarchy (reduction, re-use, sorting at source), in addition to sweeping

¹ The hierarchy: source reduction, re-use, sorting at source, automated sorting and recycling, treatment (composting and energy recovery), and final disposal of refuse waste by using it to degraded sites, and removal of toxic materials.

and collection. The municipalities shall also be responsible for the other stages of the hierarchy (treatment preceded by additional necessary sorting and final disposal), in part or in whole, conditional upon prior approval from the Ministry of Environment based on environmentally and economically viable projects proposed by relevant municipalities within established deadlines.

5. Reaffirming the Government's duty to ensure efficient resource allocation by assigning to the central authorities the final steps of the hierarchy of management of waste from municipalities that are not capable of carrying them out on their own (i.e. the stages of treatment preceded by necessary additional sorting and final disposal), in-line with the regions divisions (service areas) laid out in principle six below.
6. Balanced development by including all governorates in the proposed policy. With the aim of proper implementation of principle five above in relation to the last stages of the waste management hierarchy, and the adoption of the service areas specified in Council of Ministers Decision 1 of June 28, 2006, with the possibility of amending them into six service areas as follows:
 - a. Administrative Beirut and Dahieh, and part of Matn and Baabda Districts (the coastal part);
 - b. Aley and Chouf Districts, and the remaining part of Baabda District;
 - c. Keserwan and Jbeil Districts, and the remaining part of Matn District;
 - d. South Lebanon and Nabatieh Governorates;
 - e. North and Akkar Governorates;
 - f. Beqaa and Baalbek-Hermel Governorates.
7. Ensuring competitiveness, innovation and the spirit of enterprise by adopting various internationally proven technologies, selecting sites based on specified environmental conditions and adopting degraded as a preference.
8. Disseminating a culture of shared responsibility for integrated solid waste management. To this end, the Ministry of Environment prepares and implements a comprehensive outreach program to simplify the concept of the solid waste management hierarchy and clarify the role of each citizen and institution in its proper implementation.

2. The Procedural Aspect of the Policy:

2.1 Household Solid Waste Procedural Aspect

In reference to the first stages of the solid waste management hierarchy (reduction, re-use, sorting at source), and sweeping and collection:

- The Ministry of Environment shall prepare exemplary terms of reference for the sort-at-source process, and sweeping and collection, and disseminate it via the Ministry of Interior and Municipalities to municipalities and *qaimaqams* in villages with no municipalities to apply it within three months from the date of approval of this policy by the Council of Ministers.
- Municipalities, unions of municipalities and *qaimaqams* shall assess the exemplary terms of reference above and decide themselves if they want to apply them individually or collectively or as unions of municipalities, so as to ensure that this service is not interrupted in areas where it is currently provided centrally.
- Municipalities shall continue their awareness raising activities about reduction, re-using material, sorting at source and recycling, in application of circular No. 1/8 of November 16, 2015 issued by the Ministry of Environment on guidelines relating to integrated municipal solid waste management for municipalities, unions of municipalities, *qaimaqams* and governors, and its amendment by circular No. 1/7 of November 16, 2017.

As regards the development of the recycling sector, the Ministry of Environment shall prepare a program to this end in coordination with the relevant governmental bodies indicated in section four (The Institutional Aspect). The program shall take into account the available research on this subject (analysis of information on the quantity and types of wastes produced, related recovery processes and the basic requirements to develop this market, i.e. research and development), particularly following the issuing of Decree 167/2017 on reduction of customs duties and taxes on equipment and technologies that limit or prevent pollution and those that preserve the environment.

As regards to the last stages of the solid waste management hierarchy (treatment preceded by additional necessary sorting and final disposal), the following should apply:

- Immediately upon the adoption of this policy by the Council of Ministers, the Ministry of Environment shall prepare a detailed survey form and shall send it to the municipalities, unions of municipalities and *qaimaqams* through the Ministry of Interior and Municipalities to assess their capabilities to administer these stages, in part or in full, as municipalities, collectives of municipalities, unions of municipalities or districts, within one month from receiving the Ministry of Environment's survey form, which shall include the penalties and fines to be levied on non-respondent municipalities. Municipalities showing readiness to administer these stages will be given two months to submit their proposals to the committee indicated in section four (The Institutional Aspect), with any proposed projects to be environmentally² and economically³ viable.
- Based on their responses, municipalities shall be divided into two groups:
 1. Municipalities that are capable of carrying out all the stages of the solid waste management hierarchy on their own, and that will be required to abide by the rules specified in principle four of section one above. These municipalities shall hold relevant tenders in accordance with the rules and regulations;
 2. Municipalities that are not capable of carrying out all the stages of the solid waste management hierarchy on their own, and that therefore would have to be involved in programs carried out by the central authorities as per principle five of section one above and as per the regional divisions laid out in principle six of the same section. The terms of reference for these projects shall include at least one site⁴ and one treatment and final disposal method⁵ for each service area, with the possibility of adopting a preferable site or method, and taking into account any existing, under construction or planned treatment and final disposal facilities and related operation contracts.

Law 48/2017 on the organization of public-private partnerships shall be referred to in all cases.

Given that the time frame necessary to begin operation of new treatment and final disposal facilities in all regions is no less than two years from the date of approval of this policy by the Council of Ministers, and since the current transitional plan for Beirut and Mount Lebanon Governorates is unlikely to cover the entire period specified by Council of Ministers Decision No. 1 of March 12, 2016, rectified by Decision No. 1 of March 17, 2016, i.e. through July 2020, due to the incomplete application of the clauses of that decision, in the interests of continuing vital sanitation services to safeguard public health and the social and economic public order, the Council for Development and Reconstruction shall be charged with the following⁶:

- Rehabilitate and increase the efficiency of the sorting plants in Karantina and Aamroussieh to improve the sorting process and enhance its recovery rate, by increasing sorting lines when necessary and providing the plants with specific equipment to produce refuse-derived fuel (RDF).
- Rehabilitate the treatment plant in the Coral area as a mechanical biological treatment plant (MBT) with biodrying.

² Environmental viability: Based on the report defining the scope of the environmental impact assessment, if the project is not in implementation yet (followed by a detailed environmental impact assessment within three additional months at most), or an environmental audit study if the project is already in implementation, to be approved by the Ministry of Environment. The study should include a commitment to designate a supervisory advisory office, and the local authorities shall provide the Ministry of Environment with copies of regular reports issued by this body. In addition, the local authorities shall employ a full-time environmental engineer.

³ Economic viability: Based on the principle of economy of scale, the principle of allocative efficiency and the sources of financing.

⁴ Sites: The sites approved by Council of Ministers Decision No. 1 of June 28, 2006 may be adopted after re-inspection and completion of necessary initial studies by the Council for Development and Reconstruction, beginning with the sites in Beirut and Mount Lebanon Governorates, or any other sites with agreement of the relevant municipalities based on the Updated Master Plan for the Rehabilitation and Closure of Uncontrolled Dumpsites (paragraph 2-3), or the master plans being prepared as shown in paragraph 6.

⁵ Methods: The methods approved by Council of Ministers Decision 1 of June 28, 2006 and Decision 55 of September 1, or any other internationally proven technologies, with the most appropriate technology to be selected in accordance with the specificities of each service area.

⁶ After completing the necessary environmental studies and obtaining the approval of the Ministry of Environment

- Build an MBT plant with biodrying in the Ghadir River estuary area.
 - Create sanitary landfills in Beirut, Mount Lebanon, North and South Governorates (the sites shall be proposed by unions of municipalities to the Ministry of Interior and Municipalities and the Committee indicated in section four below, giving preference to degraded sites, within fifteen days, under penalty of non-respondent municipalities being referred to the relevant judicial authorities as stipulated in section five)*.
- *This clause was deleted during the Council of Ministers (CoM) session of January 11, 2018.**
- These facilities are to be ready for use within one year from the CoM approval of this policy.

2.2 The Procedural Aspect Relating to the Gradual Closure and Rehabilitation of Uncontrolled Dumpsites:

Based on the 2017 Updated Master Plan for the Rehabilitation and Closure of Uncontrolled Dumpsites (MSW dumps and rubble dumps), the Ministry of Environment shall communicate with relevant municipalities to begin the gradual implementation of this plan, coinciding with the establishment of new treatment and final disposal facilities.

2.3 The Procedural Aspect Relating to Hazardous and Other Wastes:

The Ministry of Environment shall prepare a prompt feasibility study based on the available studies in the sector of hazardous and other wastes. Based on the findings and in accordance with Law 48/2017 and the environmental laws and regulations in effect, it shall take the necessary steps to:

- Build three interim storage plants (two on the coast and one inland; the sites shall be proposed by the bidders as per the standards set in terms of reference) for hazardous industrial waste, electronic waste, expired drugs, healthcare waste (hazardous and non-infectious, and those requiring special management), persistent organic pollutants, etc.
- Build treatment plants, on sites proposed by the bidders as per the standards set in the terms of references, for used oil, tires, and batteries.
- Build special incinerators for other types of wastes (such as slaughterhouse wastes, dead animals, etc.).
- Allocating an abandoned quarry in each district for the treatment of rubble waste and final disposal of bulky refuse/waste.

3. The Financial and Economic Aspect of the Policy

The implementation of the first stages of the solid waste management hierarchy (reduction, re-use, sorting at source), and sweeping and collection of waste shall be funded by local authorities from municipality revenues (municipal fees, the independent municipal fund, including mobile telephony revenues, donations, etc.). In addition, the provisions of Law 280/2014 shall apply for municipalities or towns in which waste treatment facilities are set up so that they benefit from an increase in their share of revenues from the independent municipal fund and from exemptions from debt incurred from solid waste management during the previous period.

The final stages of the hierarchy (treatment preceded by additional necessary sorting and final disposal) will be funded jointly from municipality revenues and the Treasury, in tandem with initiatives to recover costs, such as:

- Fees specified in the draft law on integrated solid waste management (direct charges on the source relating to solid waste management, taking into account the quantity, type and specificities of these wastes, along with the associated costs of management operations; indirect fees, such as a fee on electric bills; fees on products);
- International donations, including those related to the United Nations Framework Convention on Climate Change;
- A feasibility study on the implementation of extended producer responsibility (EPR), starting with several priority sectors.

4. The Institutional Aspect of the Policy

Until the ratification of the aforementioned draft law on integrated solid waste management, which provides for the establishment of a national commission to manage this sector under the supervision of the Minister of Environment, the Council of Ministers shall form a committee with representatives

of stakeholders (i.e. the Ministries of Environment, Interior and Municipalities, Finance, Industry, Public Health, the Office of the Minister of State for Administrative Reform, the Office of the Minister of State of Women Affairs, and the Development and Reconstruction Council), along with five representatives from the private sector: one from each of the Economic and Social Council, of other economic bodies (the Association of Lebanese Industrialists or the Federation of Chambers of Commerce, Industry and Agriculture), of specialized professional orders (engineers and chemists), of civil society, and of the academic sector (a total of 13 members). The committee will be chaired by the Minister of Environment. The committee's task shall be to oversee the proper implementation of this policy upon approval of the Council of Ministers, and to select the necessary projects to strengthen the institutional capacities of each of the institutions represented.

5. The Legal and Supervisory Aspect of the Policy

Ratify the draft law on Integrated Solid Waste Management referred by the Council of Ministers to the Parliament in 2012 (Decree 8003/2012), which lays out the general principles of integrated solid waste management, in addition to specifying the institutional framework; the non-hazardous solid waste management hierarchy; the basics of hazardous solid waste management; the funding, fees and incentives; and the obligations, violations and penalties. In addition, prepare this law's draft regulations and the other related draft texts provided for in Law 444/2002 (Environmental Protection). Oversight shall be activated by binding the owners of solid waste treatment and final disposal facilities to providing regular reports to the Ministry of Environment. The latter shall review the reports and undertake necessary inspections for corroboration in cooperation with the Environmental Police upon implementation of Decree 3989/2016 and communicate with public environmental persecutors and environmental investigating judges (Law 251/2014) when necessary. In addition, with the aim of preventing uncontrolled dumpsites, the Ministries of Environment, Justice, and Interior and Municipalities will coordinate to:

- Set financial penalties to be incurred by each municipality for uncontrolled dumpsites or other environmental violations, by virtue of an implementation decree of Law 444/2002 (Article 4c) to be issued by the Council of Ministers upon suggestion of the three ministers. This penalty shall be levied directly on the municipal resources allocated from the independent municipal fund, including mobile telephony revenues;
- Deem the act a criminal offense by the mayor, deputy mayor and municipality members, and anyone else proven to be complicit in the process of uncontrolled dumping.

6. The Strategic Aspect of the Policy

Immediately upon the adoption of this policy by the Council of Ministers, and in tandem with the start of its implementation, the Ministry of Environment shall prepare a national strategy for integrated solid waste management based on this policy, with details derived from the master plans for municipal solid waste management for each district (the Office of the Minister of State for Administrative Reform considered part of them), coupled with a strategic environmental assessment in accordance with Decree 8213/2012.

7. The Educational and Instructional Aspect of the Policy

Immediately upon the adoption of this policy by the Council of Ministers, the Ministry of Environment shall prepare and implement, in coordination with the stakeholders from the public and private sectors (Ministry of Education and Higher Education, Ministry of Information, Ministry of Interior and Municipalities/Municipalities, the special bodies represented in the committee referenced in section four), a comprehensive communication program to simplify the concept of the integrated solid waste management hierarchy and clarify the role of each citizen and institution in its proper implementation, based on circular No. 8/1 dated November 16, 2015 issued by the Ministry of Environment and amended by circular No. 7/1 dated November 16, 2017. This shall be accompanied by trainings for municipalities on the concept of integrated solid waste management, and a media and advertising campaign to dispel misconceptions.