Chapter 8
Waste Management Challenges in Malaysia

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ABSTRACT

Malaysia, an upper-middle class country, populated with approximately 31 million people generated nearly 13.9 million tonnes of municipal solid waste (MSW) at per capita of 1.23 kilogram per day in 2016. Landfills and open dumps, being the absolute opposite of sustainable waste management, received about 80% of this generated MSW. Waste collection is on a par with developed nations, and almost all urban MSW is being collected for disposal. However, illegal dumping still occurs sporadically, and it can account for 10% of the total MSW generated. Hence, Malaysia is facing a stiff challenge in reducing the amount of waste sent to landfills and adopting sustainable waste management. National Solid Waste Management Department of Malaysia targets to divert 40% of MSW from landfills by 2020. There are total 296 landfills in Malaysia, and only 165 landfills are currently functional whereas the number of sanitary landfills is 8 out of 165 operating landfills. The national recycling rate of MSW was 17% in 2016 and the national recycling target in 11th Malaysian Plan is 22% by 2020.

COUNTRY SITUATION

The federation of Malaysia practices a form of constitutional monarchy, and is situated in South East Asia (Figure 1). The number of states and federal territories that constitute Malaysia are 13 and 3, respectively (Figure 2). The total landmass of Malaysia is 329,847 square kilometres where Peninsular Malaysia and East Malaysia or Malaysian Borneo (Sabah and Sarawak states) are separated by South China Sea. Malaysian population in 2017 was 32 million (Department of Statistics, 2018) and the official

Figure 1. Map of south east Asia region (United Nations, 2012)

Figure 2. States of Malaysia (UNCRD, 2017)

religion of the country is Islam. Kuala Lumpur is the capital city of Malaysia. The government system in Malaysia is highly based on Westminster parliamentary system, since Malaysia was ruled by British empire before independence. While Malaysia still has a King or commonly known as Yang di-Pertuan Agong to head the country, its executive powers lie with Prime Minister of the cabinet. The economy of Malaysia was predominantly based on agriculture before 1970s, followed by a transition to multi-sector economy until 1980s and industrial sector leading the national economy since then.

WASTE DEFINITION

According to Malaysian regulation, Environmental Quality Act 1974 (Act 627), and Solid Waste and Public Cleansing Act 2007, solid waste is defined as:

- Any by-product i.e. scrap material, rejected products or unwanted surplus material that results from a process.
- Any material that is broken, spoiled, contaminated or worn out and thus needs to be disposed of.
- Any other substance that according to abovementioned law or any other written law demands the authority to dispose of, but it does not come under Act 127 as scheduled waste, or under Water Services Industry Act 2006 (Act 655) as sewage or under Atomic Energy Licensing Act 1984 (Act 304) as radioactive waste.

Solid waste can be classified into municipal solid waste (MSW), industrial waste, hazardous waste, agricultural waste and electronic waste (E-waste).

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