



Country Profile Philippines

October 2018

MANAGING MUNICIPAL SOLID WASTE AND PACKAGING WASTE

1) Municipal solid waste (MSW)¹

Background information	
Population	103 million (2016)
- Urban	44.4%
MSW generation	14.63 million t/year (2016)
MSW per capita	0.40 kg/day estimated (2016, national average)
- Urban	0.79 kg/day
- Rural (islands)	0.10 kg/day
MSW generation growth	1.7% from 2015
E-Waste	0.125 million t ²

MSW composition (2008-2013)	
Biodegradables (food waste and yard waste)	52.31%
Plastic	10.55%
Paper and paper products	8.70%
Glass	2.34%
Metal	4.22%
Textile	1.61%
Leather/Rubber	0.37%
Special waste (household healthcare waste, waste of electrical and electronic equipment, bulky waste, hazardous materials)	1.93%
Residual waste (mostly inert)	17.98%

MSW collection & treatment	
MSW collection coverage	40-85%
- Urban areas	90% in Metro Manila
- Rural areas	No data
Diversion from disposal	47% ³
- Recycled (& reuse)	31% in Metro Manila (2009)
- Composted	No data
- WtE/ biogas	No data
- Incinerated	No data
Disposal	53%
- Landfilled	No data
- Unmanaged	No data

Number of treatment & disposal sites	
Material Recovery Facilities (MRFs)	9,883
Compost sites	No data
Final disposal sites ⁴	
- sanitary/engineered landfills	103
- controlled dumpsites	130
- open dumpsites	403

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Policy, planning & legal framework

- » **The Ecological Solid Waste Management Act (RA 9003)** provides the legal framework for the country's systematic waste management programme
- » **The Implementing Rules and Regulations of the Philippine Ecological Solid Waste Management Act of 2000** prescribe the procedures and guidelines for the implementation of the RA 9003
- » **The National Solid Waste Management Strategy 2012-2016** outlines a roadmap for the implementing bodies with defined steps in achieving goals towards the fulfilment of the RA 9003
- » The **Philippine Local Government Code 1991** mandates local government units (LGUs) to take up the responsibility of solid waste management (collection, disposal, recovery) through the creation of Material Recovery Facilities in every barangay or cluster of barangays
- » Chapter XVIII of the **Presidential Decree No. 856 (Code of Sanitation of the Philippines)** describes waste collection and disposal systems in cities and municipalities
- » The **10-Year National Solid Waste Management Plan** illustrates the plans of LGUs for the reuse, recycling and composting of waste generated in their respective jurisdictions
- » For the integration of the informal **waste sector**, resolutions have been passed in 2010:
 - Resolution adopting the National Framework Plan of the Informal Sector in Solid Waste Management
 - Resolution creating the Multi-Sectoral Committee for Capacity Development of the Informal Sector
 - Resolution adopting Prototype City/ Municipal Ordinance Regulating the Establishment and Operation of Junk Shops & Provide Corresponding Penalties
- » The enforcement of the **Clean Air Act** of 1999 (RA 8749) prohibits the use of incinerators for waste for energy recovery
- » Discussions on designing the provisions of the practice of **extended producer responsibility** in the waste management sector is taking shape in the Philippines. E.g. Senator Cynthia Villar is pushing for the implementation of EPR in the packaging sector⁵

Institutional framework

- » Solid waste management functions in the Philippines are distributed among national, regional and local government entities
- » The **Department of Environment and Natural Resources (DENR)** is the main national government agency for all concerns regarding the environment. Under the DENR, the **Environmental Management Bureau (EMB)** provides technical and financial assistance to local government units (LGUs) to assist them in the implementation of the RA 9003
- » The **National Solid Waste Management Commission (NSWMC)**, with Secretariat support from DENR-EMB, sets policies, prepares the national solid waste management framework, oversees the implementation of the RA 9003, approves solid waste management plans prepared by LGUs and prepares the national solid waste management status report.
- » The **National Ecology Centre**, chaired by the Director of EMB, provides technical support to LGUs and establishes and manages a solid waste management database
- » The **Department of Interior and Local Government (DILG)**, a regular member of the NSWMC, administratively supervises all LGUs in the implementation of the RA 9003
- » Under the RA 9003, the collection, transport, and disposal of solid waste are the **responsibilities of LGUs**. In 2016, criminal and administrative charges were filed against 50 LGUs for violations of RA 9003 provisions.
- » As mandated by the RA 9003, three levels of LGUs (a Provincial SWM Board, a City/Municipality SWM, and a Barangay SWM Committee) manage all solid waste management programs
 - **City/Municipal Solid Waste Management Boards** prepare, submit and implement the local 10 years SWM Plans, review the plan every 2 years, collect, manage, and dispose of special and residual waste
 - **Barangay Solid Waste Management Committees** handle the overall collection of biodegradable and recyclable waste, establish and manage Material Recovery Facilities, and conduct information and education campaigns



Reuse and upcycling in Iloilo, Philippines

- In Metro Manila, the **Metropolitan Manila Development Authority (MMDA)** is the LGU. For solid waste management in Metro Manila, the Solid Waste Management Office under MMDA monitors the compliance of the LGUs with the RA 9003.

Financial & cost recovery arrangements

- » In 2018, the DENR earmarked 1.25 billion PhP (23 million US\$) out of a national budget of 27.1 billion PhP (499 million US\$) for the environmental protection programme for clean water, air and solid waste management⁶
- » For most of the cities in the Philippines, the budget spent for waste management is about **20% of the LGUs' total budgets**⁷
- » Budgetary requirements for SWM are sourced from the general funds of a city
- » Local governments are mandated by the Local Government Code to collect fees for services, however the **fee collection is ad-hoc** and does not cover the actual costs

Private sector involvement

- » The **Co-ordinating Council for Private Sector Participation (CCPSP)** oversees and monitors private sector participation in public infrastructure and services programmes
- » **Private sector participation in the solid waste sector** concerns waste collection, managing landfill sites and MRFs (Example: the MRF in San Fernando City, Pampanga, is managed by a private firm, while the land is provided by the City Government as a Build-Operate-Transfer PPP project)
- » Efforts are made to **formalise waste picker initiatives** as PPP solutions by giving informal recyclers/ junk shops concessions to collect or receive materials/ to operate recycling centres (example: Quezon City)

2) Packaging waste⁸

Packaging consumption	
Packaging units consumed	65.8 billion units (2018 forecast) ⁹
Packaging export	163.2 million PhP (3 million US\$) (2011) ¹⁰
Sectoral consumption	No data
Usage of packaging (by material type)	No data

Plastic industry and plastic products	
Growth rate of plastic industries	CAGR of 6.11% (forecast for period 2018 - 2023) ¹¹
No. of plastic industries	No data
Plastic (products) raw material produced	No data
Plastic used for packaging	48% (2017)

Packaging waste generation

- » **Annual plastic use:** 8 kg/person¹² (2013)
- » **Plastic bag usage:** No data
- » **Volume of plastic waste generated:** 79% of plastic residual waste comes from food packaging (plastic carrier bags, sachets etc.), 12% from household products, 8% from personal care products
- » **Plastic waste management:** Recycled fractions of packaging waste are segregated at MRFs and sent for recycling. There are 23 plastic recycling facilities, 14 paper recycling facilities, 1 recycling facility for tin cans, 2 for metals, 1 for Tetra Pak, 6 for glass recycling¹³
- » **Plastic leakage into the ocean:** The Philippines are worldwide the 3rd largest contributor with 0.28-0.75 million t/year of plastic entering to oceans from coastal areas¹⁴
- » **Composition of waste disposed in waterways:** in Manila Bay, a waste audit conducted in 2014 found that out of 1,594 litres of waste collected, 61.9% were plastics (23.2% plastic bags, 18.8% plastic wrappers), 15.7% cigarette butts, clothes, rags and sponges, 11.9% rubber, 9.7% biodegradables¹⁵

Plastic recycling in Iloilo, Philippines

Policies and initiatives

- » The RA 9003 under Article 4, Section 27 states that “the Department of Trade and Industry shall formulate and implement a **coding system for packaging materials and products** to facilitate waste recycling and reuse”
- » The LGUs implement and propose **plastic use reduction** measures by passing Ordinances, e.g. Ordinance No. SP-2140 or the Plastic Bag Reduction of the Quezon City (since 2012)
- » Other Proposed bills on single-use plastics are:
 - Senate Bill No. 1866 – **Plastic Straw and Stirrer Ban of 2018**, Senate Bill No. 430
 - Plastic Bags Regulation Act, and Senate Bill No. 2759 – Total Plastic Ban Act of 2011
 - Philippine National Standards 2097:2014 or the PNS on **Plastics Shopping Bags** -PNS 2092:2011 on biodegradable plastics promote use of biodegradable plastic bags as alternative
 - “Plastic Bag Regulation 2013” bill is under deliberation, requiring biodegradable plastics complement the ongoing recovery and recycling programs
- » Some government offices (e.g. Dipolog City and Cebu City Government Offices) have banned single-use plastic items in their premises
- » **Private sector** stakeholders also pledge to curb packaging waste through CSR activities
 - **Polystyrene Packaging Council** of the Philippines, a group of 21 foam polystyrene producers, has set up a recycling plant
 - The **Philippine Alliance for Recycling and Materials Sustainability (PARMS)**, a partnership supported by the NSWMC, is a multi-sectoral coalition composed of top consumer goods companies. PARMS plans to build a 25 million PhP (0.46 million US\$) recycling facility for sachets in Metro Manila.
 - The **Pulp and Paper Manufacturers Association** collaborates with various sectors to improve the recovery of waste paper



Stakeholders in the packaging value chain

- » **Design & production:** The Packaging Institute of the Philippines, The Philippine Plastics Industry Association, Inc.
- » **Retail & consumption:** Fast-moving consumer goods companies, wholesalers, retailers, Philippine Association of Supermarkets, malls, markets, households
- » **Waste collection:** LGUs, informal sector
- » **Sorting & recycling:** recycling factories, Philippine Alliance for Recycling and Materials Sustainability (PARMS)
- » **Government:** Department of Environment and Natural Resources, Environmental Management Bureau, National Solid Waste Management Commission

Options for further action

- » Further enhance institutional, technical and financial capacities of Local Government Units (LGUs) to manage municipal solid waste, including packaging waste
- » Diversify financing mechanisms through cost sharing between the national government and LGUs, waste fee collection in LGUs, and private sector investments through public-private partnerships
- » Apply Extended Producer Responsibility (EPR) and the Polluter Pays Principle to involve the consumer goods industry in financing and organising packaging waste management
- » Continue efforts in public education and awareness raising to inculcate sustainable consumption habits
- » Maintain a material flow database for packaging and packaging waste

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- 1 MSW related information was compiled from various sources, including (i) Senate Economic Planning Office (SEPO) (2017) Philippine Solid Wastes at a Glance. https://www.senate.gov.ph/publications/SEPO/AAG_Philippine%20Solid%20Wastes_Nov2017.pdf, (ii) NSWMC. Solid waste management dashboard. Available at <http://119.92.161.4/nswmc4/default3.aspx>; (iii) Department of Environment and Natural Resources-Environmental Management Bureau (DENR-EMB) (2015) National Solid Waste Management Status Report (2008-2014). <http://nswmc.emb.gov.ph/wp-content/uploads/2016/06/Solid-WasteFinalDraft-12.29.15.pdf>, (iv) Country assessment report, presentation, country 3R Profile submitted to the 8th regional 3R Forum, 9-12 April, 2018, Indore, India, [http://www.uncrd.or.jp/content/documents/5693\[Nov%202017\]%20Philippines.pdf](http://www.uncrd.or.jp/content/documents/5693[Nov%202017]%20Philippines.pdf), (v) newspaper articles
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- 3 Reuse, recycling, composting, and other resource recovery activities which reduce or eliminate the amount of solid wastes from waste disposal facilities
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