



# Country Profile Viet Nam

October 2018

## MANAGING MUNICIPAL SOLID WASTE AND PACKAGING WASTE

### 1) Municipal solid waste (MSW)<sup>1</sup>

| Background information |                                       |
|------------------------|---------------------------------------|
| Population             | 91.7 million (2015)                   |
| - Urban                | 33.6 million                          |
| MSW generation         | 19 million t/year (2015) <sup>2</sup> |
| MSW per capita         | 1.20 kg/day                           |
| - Urban                | No data                               |
| - Rural (islands)      | No data                               |
| MSW generation growth  | 12% (2011-2015)                       |
| E-Waste                | 0.115 million t <sup>3</sup>          |

| MSW composition          |     |
|--------------------------|-----|
| Organic                  | 55% |
| Plastic                  | 10% |
| Paper and paper products | 5%  |
| Glass                    | 3%  |
| Metal                    | 6%  |
| Rubber                   | 4%  |
| Others                   | 17% |

| MSW collection & treatment |   |
|----------------------------|---|
| MSW collection coverage    | 40-85%                                      |
| - Urban areas              | 84-85% (95-95% in Hanoi & Ho Chi Minh City) |
| - Rural areas              | 40-55%                                      |
| Diversion from disposal    | 44%   |
| - Recycled (& reuse)       | No data                                     |
| - Composted                | No data                                     |
| - WtE/biogas               | No data                                     |
| Disposal                   | 56%   |
| - Landfilled               | 56%   |
| - Unmanaged                | N/A   |

| Number of treatment & disposal sites                |                |
|---|----------------|
| No. of treatment facilities                         | 36             |
| - Incinerators                                      | 5              |
| - Compost sites                                     | 12             |
| Composting & incineration (without energy recovery) | 18             |
| - WtE plant   | 1 (since 2016) |
| No. of final disposal sites                         |                |
| - No. of sanitary/engineered landfills              | 203            |
| - No. of controlled dumpsites                       | N/A            |
| - No. of open dumpsites                             | 457            |

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## Policy, planning & legal framework

- » **Law on Environmental Protection** (No. 55/2014/QH13) – Revised in 2014) is the first law text relevant to all environmental protection issues including waste
- » In Viet Nam, sustainable solid waste management is one of the 7 priority programs of the “**National strategy for environmental protection until 2010 and vision toward 2020**”
- » The **National Strategy on Integrated Solid Waste Management until 2025, vision to 2050** (Decision No. 2149/QĐ-TTg of the Prime Minister issued on 17 December 2009 - currently in revision) is the most recent government action for waste management
- » The National Action Plan for the implementation of the 2030 sustainable development agenda (2017) includes targets relevant for waste management<sup>4</sup>
- » Other legal and policy documents and master plans for waste management:
  - Government Decree No. 38/2015/ND-CP of April 24, 2015 on **solid waste management and scraps**; effective from 15 June 2016
  - Prime Minister’s Decision 16/2015/QĐ-TTg dated 22 May 2015 on collection and treatment of discarded products (electrical and electronic appliances, lubricant oils, used tyres, ELVs) has introduced **Extended Producers Responsibility**
  - Prime Minister’s Decision No. 71/2010/QĐ-TTg-dated November 09, 2010 on promulgating the Regulation on pilot investment in the **public private partnership** form, waste treatment plants are one of nine sectors prioritized for PPP
  - Circular No 32/2015/TT-BCT on project development and Standardized Power Purchase Agreement for power generation projects using solid wastes

## Institutional framework

- » At national level, the **Ministry of the Natural Resources and Environment (MONRE)** is responsible for environmental affairs. MONRE takes overall responsibility for waste management and direct management of hazardous waste through the Viet Nam Environmental Administration (VEA)

- » Other line ministries responsible for waste management activities are:
  - Ministry of Construction (MOC): development of master plans, standards for waste treatment facilities and management of construction & demolition waste
  - The Ministry of Agriculture and Rural Development (MARD): agricultural and rural waste
  - The Ministry of Health (MOH): waste from hospitals and medical establishments
  - Ministry of Industry and Trade (MOIT): industrial waste
- » At **provincial and local level**, the People’s Committee (PCCs) or Municipal People’s Committee, the Department of Natural Resources and Environment (DONRE), the Department of Construction (DOC), the Urban Environment Company (URENCO) or (CITENCO) are involved in MSW management
- » Together with the formal waste collection system, the informal waste sector is also engaged in waste collection, transportation and recycling activities

## Financial & cost recovery arrangements

- » Provincial waste management spending is often met by the **Central and local State budget**
- » Almost 90% of the budget is spent for waste collection and transportation, very little is left for waste treatment and disposal
- » Cities also collect a ‘**sanitary**’ **fee for waste management service delivery** from waste generators. The fee ranges around 21,000 VND (0.9 US\$) per household per month in urban areas and 0.7 US\$ in rural areas. The waste fee is equivalent to 0.5% of the average household expenditure.
- » The **waste fee covers less than 60% of the total waste management costs** (in some municipalities it is enough to cover only 20-30% of the total operation cost)
- » A proposal by the Ho Chi Minh City People’s Committee on the adjustment of the sanitary fees for households in 2013-2014, was rejected
- » Waste management funding meets a serious insufficiency and imbalance in Viet Nam



Municipal solid waste collection in Can Tho, Viet Nam

### Private sector involvement

- » In urban areas, collection and transportation of domestic waste is mainly run by **private companies and cooperatives** (formed by the informal waste picker community)
- » **Urban Environment Company** (URENCO or CITENCO)- the main state-owned company in charge of waste collection, maintaining hygiene in public places, public lighting, planting and maintenance of roadside trees, and transport, and treatment in the province or city
- » Other private companies are involved in waste collection. In Ho Chi Minh City, 50% of MSW is collected by private companies, while in Hanoi the proportion is 20% (17 private companies and 7 public entities)
- » Viet Nam encourages private sector and foreign investments, amended Constitution in 1992
- » Between 2003-2012, Viet Nam had received 213 million US\$ of solid waste management focused development finance (19 grants, 182 concessional loans, 12 non-concessional loans)
- » Public Private Partnership (PPP) is another funding mechanism sought by the Viet Nameese government.
- » Viet Nam largely **supports private investment** in the sector:
  - Decree No. 59/2007/ND-CP issued by the Government in 2007 related to solid waste management enables private companies to enter an initially public sector
  - The Prime Minister's Decision No. 71/2010/QD-TTg dated November 09, 2010 on promulgating the Regulation on pilot investment in the public-private partnership form also indicates waste treatment plants as one of the nine sectors for pilot investment in the public-private partnership form
- » Established in 2002, the **Viet Nam Environment Protection Fund (VEPF)** is one of the important investment sources that provides soft loans, interest rate support, funding and co-funding, price subsidies for environment protection products, entrusted loans for waste treatment, wastewater treatment facilities

## 2) Packaging waste<sup>5</sup>

| Packaging production & consumption <sup>6</sup> |  |
|---|--|
| Packaging industry value                        | 4.7 billion US\$ (2016), plastic packaging is the largest and fastest growing segment  |
| Packaging industry growth rate (average)        | 10% (one of the emerging industries)   |
| Composition of packaging industry (by type)     | Plastic packaging (4.7 billion US\$, 64%), Paper & corrugated boxes (1.2 billion US\$, 16%), Metal packaging (1.1 billion US\$, 14%), glass packaging (0.5 billion US\$, 6%) |
| Share of packaging in plastic production        | 38% of total plastic production is for packaging (the largest share), followed by 29% for household products, and 18% for construction                                       |
| Flexible packaging market size                  | Estimated at 953 million US\$ (2016), 400 companies producing flexible packaging; 14 players dominate 54% of flexible packaging market                                       |
| Sectoral consumption of plastic packaging       | Food and beverage sector, followed by non-food sector (beauty, personal care, home care)   |

| Plastic industry and plastic products |  |
|---------------------------------------|--|
| Plastic industry                      | Over 2,000 firms operating in the country (2016), with an annual growth of 16-18% in the period of 2010-2015, 12.6 billion US\$ business volume  |
| Import & export                       | Import of plastic resins, packaging machinery and equipment from Korea (22%), Taiwan (17%), Thailand (11%), Singapore (13%) and Saudi Arabia (12%); PT Indorama from Thailand and Hyosung from Korea are the biggest resin supplier for PET bottle manufacturers in Viet Nam |

### Packaging waste generation

- » **Annual plastic (and plastic derived products) use:** 41 kg (2015), 33 kg (2010)<sup>8</sup>
- » **Plastic bag usage (in malls and traditional markets):** 20 t/month (Big C); 10 t/month (Maxi Mart); 200-300 kg/day (Don Xuan market)
- » **Marine plastic leakage:** 4th largest contributor, 0.28-0.73 million t/year of plastic into oceans<sup>9</sup>
- » **Composition of waste disposed into waterways:** Main sources of plastic marine debris consists in wide use of plastic products and mismanaged municipal solid waste<sup>10</sup>

### Policies and initiatives

- » Viet Nam has formulated an innovative policy including economic and regulatory measures, which directly and/or indirectly help fighting plastic pollution and marine debris:
  - Par. 4, Art. 3 of the Environmental Protection Tax Law (Decree No. 67/2011/ND-CP) imposes tax on nylon bags (plastic bags) (30,000-50,000 VND/kg; 1.3-2.1 US\$/kg). The Decree is currently under review and revision, with the Ministry of Finance proposing to increase the tax on plastic bags from 40,000 to 200,000 VND/kg (8.5 US\$/kg).
  - Circular No. 07/2012/BTNMT details the regulation on **eco-friendly plastic bags**. Up to March 2017, 34 different kinds of plastic bags from 30 companies were approved as eco-friendly bags.
  - Decision No. 582/QĐ-TTg in 2013 to approve the project on enhancing the control of environmental pollution due to the use of non-biodegradable **plastic bags** by 2020
  - The **Prime Minister's Decision No. 06/2018/QĐ-TTg** of 2018 is the latest measure to reduce marine pollution
  - Strategy for Sustainable exploitation and utilization of marine natural resources and environment protection until 2020 and vision 2030 (Prime Minister's Decision No. 1570/QĐ-TTg of 6<sup>th</sup> Sept. 2013) includes tasks "to **control the sources of pollution** of the seawater environment and on islands"
  - Strategy for Viet Nam's integrated coastal management up to 2020 and vision toward 2030 (Decision No. 2295/QĐ-TTg dated December 17<sup>th</sup>, 2014 of the Prime Minister)
- » With China putting a restriction on the import of scrap plastics, waste import in Viet Nam has increased significantly (0.25 million tonnes of plastic was imported in 2016 and 0.27 million tonnes in just the first half of 2018<sup>11</sup>). Viet Nam has imposed temporary restrictions on the import of plastic scraps and stopped issuing new licenses for scrap imports

### Stakeholders in the packaging value chain

- » **Design & production:** Viet Nam Packaging Association (VIPNAS), Viet Nam Plastics Association
- » **Retail & consumption:** Food and beverage companies, wholesalers, retailers, malls, markets, households

- » **Waste collection:** local governments and companies (e.g. URENCO, CITENCO), informal sector
- » **Sorting & recycling:** Packaging material recyclers, recycling association
- » **Government:** MONRE, Viet Nam Administration of Seas and Islands (VASI) under MONRE

### Options for further action

- » Enhance financial resources and technical capacities for sustainable solid waste management
- » Translate national waste management targets into strategies and action plans
- » Elaborate a specific packaging waste directive or law
- » Apply Extended Producer Responsibility (EPR) also for packaging waste by using experiences from the existing EPR mechanism for waste from electrical and electronic equipment
- » Create a robust database for packaging waste flows to support a circular economy approach across the packaging value chain.
- » Continue behaviour influencing programmes to reduce plastic bag consumption



Waste collection vehicles in Rach Gia, Viet Nam

### References

- 1 MSW related information are compiled from various sources, including (i) 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/5696%5bNov%202017%5d%20Vietnam.pdf>, (ii) MONRE (2016) National State of Environment 2016. Urban Environment. [http://opendata.vn/sites/default/files/b010000\\_2016\\_bchmttgq\\_moi\\_truong\\_do\\_thi.pdf](http://opendata.vn/sites/default/files/b010000_2016_bchmttgq_moi_truong_do_thi.pdf), (iii) MONRE (2011) National Environmental Report 2011: Solid Waste. [http://cem.gov.vn/VN/BAOCAO\\_Content/tabid/356/cat/177/nfriend/3741672/language/vi-VN/Default.aspx](http://cem.gov.vn/VN/BAOCAO_Content/tabid/356/cat/177/nfriend/3741672/language/vi-VN/Default.aspx)
- 2 In Viet Nam, Municipal Solid Waste is calculated based on the Urban Domestic Waste (UDW). UDW is 60-70% of the total Municipal Solid Waste. In 2016, the UDW was 38,000 tonnes/day, which equals to 13.87 million tonnes/year. Now adding the remaining 30%, the total MSW generated in the country in 2015 becomes 19 million tonnes. (a) MONRE (2016) National State of Environment 2016. Urban Environment. [http://opendata.vn/sites/default/files/b010000\\_2016\\_bchmttgq\\_moi\\_truong\\_do\\_thi.pdf](http://opendata.vn/sites/default/files/b010000_2016_bchmttgq_moi_truong_do_thi.pdf) (b) MONRE, Viet Nam Environment Monitor 2011. National State of Environment 2011- Solid Waste. [http://cem.gov.vn/VN/BAOCAO\\_Content/tabid/356/cat/177/nfriend/3741672/language/vi-VN/Default.aspx](http://cem.gov.vn/VN/BAOCAO_Content/tabid/356/cat/177/nfriend/3741672/language/vi-VN/Default.aspx) In this report, urban domestic waste in 2008 was 12.8 million tonnes and 6.6 million tonnes out of 9.8 million rural waste was rural domestic waste. Hence the total MSW in 2008 was 19.4 million tonnes (Table 1.3 on Pg. 8, and Section 3.2.1 on Pg. 42)
- 3 United Nations University (UNU) South East Asia E-Waste Monitor. [http://collections.unu.edu/eserv/UNU:6348/Regional\\_E-waste\\_Monitor\\_Easr\\_Southeast\\_Asia\\_low.pdf](http://collections.unu.edu/eserv/UNU:6348/Regional_E-waste_Monitor_Easr_Southeast_Asia_low.pdf)
- 4 United Nations Viet Nam (2017) The National Action Plan for the implementation of the 2030 sustainable development agenda. [http://www.un.org.vn/en/publications/doc\\_details/543-the-national-action-plan-for-the-implementation-of-the-2030-sustainable-development-agenda.html](http://www.un.org.vn/en/publications/doc_details/543-the-national-action-plan-for-the-implementation-of-the-2030-sustainable-development-agenda.html)
- 5 In the absence of published reports, information on packaging industry waste related information was compiled from various sources, mainly market research (sample) reports, packaging industries and associations, blogs and newspaper articles. The majority of the information available in the public domain is on plastic packaging and very few to none is on other packaging materials.
- 6 StoxPlus (2017) Viet Nam Flexible Packaging Market 2017. <https://biinform.com/Reports/F9F-vietnam-flexible-packaging-market-2017-report.html>
- 7 Viet Nam News (2018) 'VN Packaging Industry Set for Growth'. Website, March 8, 2018. <https://vietnamnews.vn/economy/423949/vn-packaging-industry-set-for-growth.html#0vWuFsrYYiLuisvH.97>
- 8 Tran Thi Thu Trang (2016) Viet Nam Plastic Industry Report. Vietcombank Securities. <https://www.vCBS.com.vn/en/Communication/GetReport?reportId=4778>
- 9 Jambeck, J.R., Geyer, R., Wilcox, C., Siegler, T.R., Perryman, M., Andrady, A., Narayan, R., Law, K.L. et al. (2015) 'Plastic waste inputs from land into the ocean'. Science, vol. 347, issue 6223, p. 768-771.
- 10 Viet Nam Net (2018) 'Viet Nam challenged over polluting ocean plastic waste'. Website, 9 May 2018. <https://english.vietnamnet.vn/fms/environment/200292/vietnam-challenged-over-polluting-ocean-plastic-waste.html>
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