

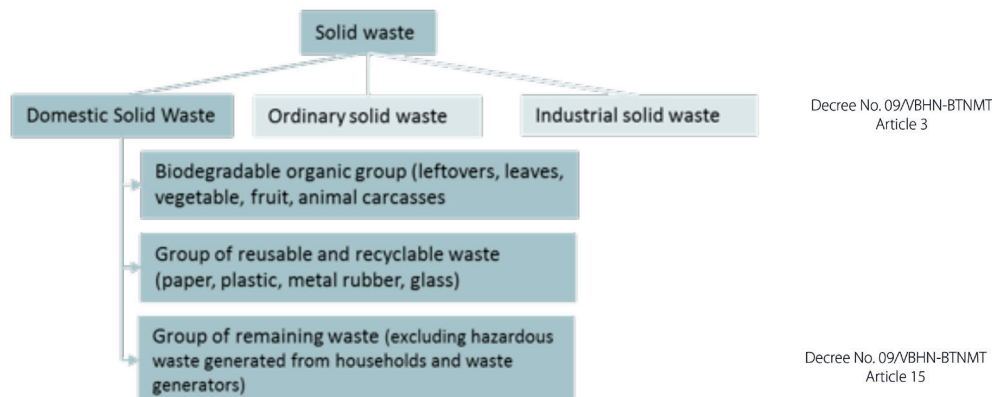
WASTE CATEGORIES, OPERATORS AND FACILITIES IN HCMC, VIETNAM

Objective

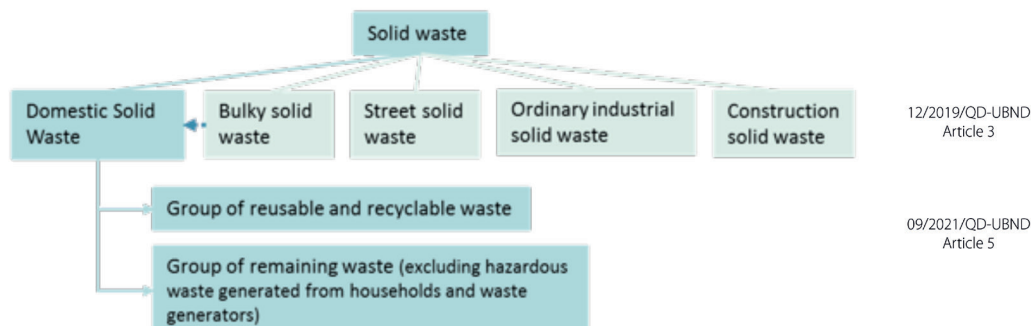
This factsheet provides the key definitions of domestic solid waste management, waste operators and waste facilities in Ho Chi Minh City (HCMC), Vietnam, based on legal documents and field observations. Those definitions are crucial to understand the current domestic solid waste organization and prepare the transition towards the EPR implementation.

1. DEFINITION OF DOMESTIC SOLID WASTE CATEGORIES, WASTE OPERATORS AND FACILITIES BY LEGAL DOCUMENTS

Solid waste categorization at national level



Solid waste categorization in HCMC





Definitions of types of solid waste in HCMC

(decision 09-2021-QĐ-UBND; decision 12/2019/QĐ -UBND)

- **Solid waste** refers to waste in solid or viscous form (i.e. sludge) discharged from production, businesses, service activities, and others.
- **Domestic solid waste (DSW)** refers to solid waste generated from people’s daily activities. They should be sorted into:
 - **Reusable and recyclable waste.**
 - **Remaining waste** (excluding hazardous waste generated from households and others).
- **Bulky solid waste** refers to solid waste of large sizes such as household items (e.g. wardrobes, beds, mattresses, tables, lounge chairs, paintings, etc.), tree stumps, trunks, and branches, and is managed as DSW.
- **Ordinary industrial solid waste** refers to solid waste generated from production, businesses

and service activities not on the list of hazardous wastes or on the list of hazardous wastes but with hazardous elements below the hazardous waste threshold.

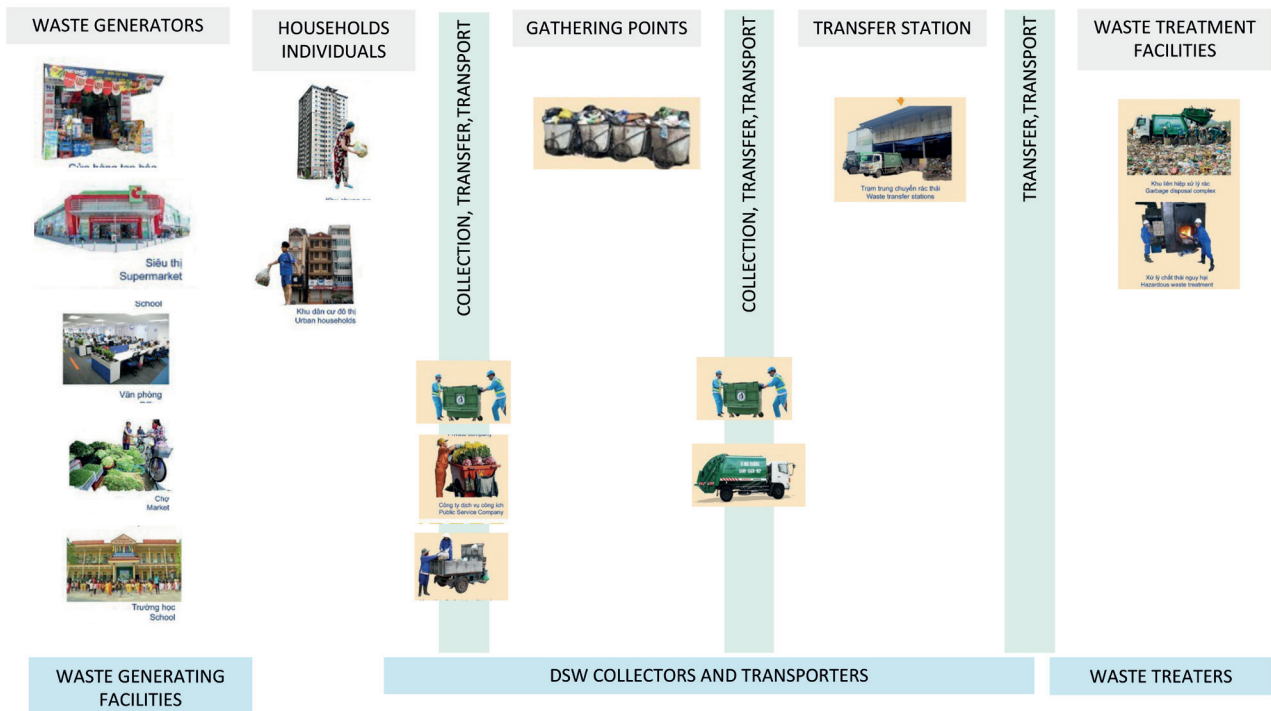
- **Construction solid waste** refers to solid waste generated during the process of survey and construction work (including new construction, repair, renovation, relocation, improvement, restoration, demolition works).
- **Street solid waste** refers to solid waste existing on streets, sidewalks and public places.

Note: Plastic waste is categorised under domestic solid waste: **reusable and recyclable waste.**

Definitions of waste generators, operators and waste facilities in HCMC

(decision 12/2019/QĐ –UBND)

Definition of terms used in HCMC to describe the domestic solid waste management facilities and operators
decision 12/2019/QĐ –UBNDx



- **Waste generating facilities** refer to production, business and service establishments where waste is generated.
- **Waste generators** refer to organizations and individuals (*i.e.* domestic agencies, organizations, households, and domestic and foreign organizations and individuals) owning or operating waste generating facilities.
- **Waste treaters** refer to organizations or individuals that owns or operates a waste treatment facility.
- **Waste treatment facility** means an establishment that provides waste treatment services (including recycling, co-treatment and energy recovery from waste).

In the legal documents, there are no specific guidance related to the collection, transport and treatment of the group of reusable and recyclable waste.

- **DSW collectors-transporters** refer to organizations or individuals that provide services of collection and transport of DSW as prescribed.

2. DEFINITION OF EXISTING RECYCLABLE OPERATORS IN HCMC

In HCMC, and other Vietnamese cities, the DSW management operated by the City is not the only one. A parallel and sometimes **hybrid collection system** is observed for the valuable recyclable waste (Nguyen *et al.*, 2021). The stakeholders involved in the recyclable waste purchasing and recycling have been defined as:

- **Itinerant Recyclable waste Collectors (*ve chai*)**: they collect and / or buy damaged or abandoned recyclable materials which have an **economic value**. They source their supplies by foot or use simple means of transport, and then resell them to stores specialized in the purchase of recyclable materials (*e.g.* aggregators). They collect the recyclable waste during the day following a **specific route** in the area of the aggregators.

- **Gathering points** refer to temporary storage points for all types of vehicles after collecting DSW at households, waste generators, and from street cleaning to transfer DSW to specialized motorized vehicles with a large load. Gathering points are located on the road or directly where large amounts of waste are generated (markets, apartment buildings, parks).
- **Transfer stations** refer to places to temporarily gather and store DSW for transshipment onto vehicles and transport to centralized DSW treatment zones.
- **DSW treatment zones** (or solid waste treatment complexes) refer to places planned by the City to receive and treat DSW of the City.

Note: The system managed by the City (or other administrative levels such as districts, wards or communes) can involve public companies, private companies, and cooperatives.

- **Street waste collectors**: They look for and collect recyclable materials in the streets, on waste heaps, in large landfills, transfer stations or solid waste treatment complexes. They reuse them or sell them to aggregators.
- **Aggregators** (refer to both the junk shops and the owners): they buy recyclable waste from itinerant recyclable waste collectors, street waste collectors and/or directly from waste generating facilities. After a first sorting, the waste is resold to recycling companies either directly or via wholesalers.
- **Recyclers**: they refer to various realities, which may be recycling companies holding a license or recycling units, like microenterprises or family businesses, which may be grouped together within so-called "craft districts" or "craft villages", specialized in recycling.

– **Transporters:** they provide transport services using vehicles adapted to the needs, mainly low load vehicles (<2.5 tons) to transport the

recyclable waste from aggregators to recycling companies or to recycling villages.

Highlights of research in waste sector: The recyclable waste purchasing and recycling system is characterized by:

- ▶ **Status of recyclable waste workers** can be formal, semi-formal or informal, knowing that the boundaries between these categories are sometimes difficult to define.
- ▶ **Different levels of formalized interaction between the City's waste operations and the recyclable waste workers**, which imply different level of formalized interactions with the collection systems managed directly or indirectly by a municipality.
- ▶ **Individual or collective (familial or not) mode of organization**, which influences the development and the vulnerability of the activities and the sector.

3. TYPES OF WASTE IN REUSABLE AND RECYCLABLE WASTE: FOCUS ON PLASTIC WASTE

Reusable and recyclable waste includes all the types of reusable and recyclable waste sorted by the waste generators, households and individuals. The types of waste defined in this category and the types of plastic waste **vary** according to the DSW management step targeted and the department conducting the waste audit.

At the level of waste generators, households and individuals, different waste typologies have been described:

- Plastic, plastic nylon, hard foam, paper, metal tin can, glass cardboard, ... (Department of Natural Ressources and Environment)
- Plastic: recyclable, not recyclable, not recycled; paper:recyclable,notrecyclable,notrecycled,... (Ministry of Natural Ressources and Environment)

At the level of aggregators, the plastic waste is categorized as:

- nylon plastic bags,
- living plastic: PET bottles; colored plastic; homogeneous hard plastic
- dead plastic: the discarded plastic (Strady 2022)

At the level of recyclers, the plastic waste can be categorized as:

- PET bottle
- Colored PET bottles
- Mixed material PET bottles
- EPS
- PSP
- PVC
- Plastic container tray
- Film and styrofoam sheets

Source: Mrs Le Thu Hoa, EPR National Platform.



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