

**HO CHI MINH CITY PEOPLE'S COMMITTEE  
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT**

**SOLID WASTE MANAGEMENT IN HO CHO MINH  
AND CALLING-FOR-INVESTMENT PROJECTS  
FOR 2017-2025 PERIOD**

**MAY 2018**

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**2. The orientation of calling for investment in solid waste treatment**

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# **CURRENT STATUS OF SOLID WASTE MANAGEMENT**

# GENERAL INFORMATION



**HO CHI  
MINH CITY**

**Special urban; Area: 2,095.65 km<sup>2</sup>**

**Population (2017): More than 10 million  
(including immigrants); Density: 4,773 ppl/km<sup>2</sup>**

**GDP growth rate: 8.25% (2017)**

**State management system: 24 districts, 322  
wards.**

**Big pressure on environmental management:**

- **Wastewater (1,75 million m<sup>3</sup>/day);**
- **Air pollutants (from 7,9 million of transport vehicles and 839 sources of industrial air pollution);**
- **Solid waste (8.900 tons/day).**

# MUNICIPAL SOLID WASTE GENERATION SOURCES

AMOUNT IN 2016

→ **8.900 tons/day**

Household: **1.976.744** households (2016);  
generating **3,483 tons MSW/day**, consisting of **42%**.

Generating sources of MSW (production facilities, business, commercial and service facilities...): **134,640 sources** (2016);  
generating **3,359 tons MSW/ day**, consisting of **40.5%**.

Public areas (street, canal, parks, squares, bus stations, empty lot, bridge areas...): collecting amount **1,458 tons/day**, consisting of **17.5%**.

**GENERATION  
SOURCES**



# CHARACTERISTICS OF MSW OF HCM CITY

**MSW has not been separated at source.** Piloting in 24 districts with small scale (1 wards or 1 community...); after 2018, deploying replication in 24 districts.



The composition of MSW is **mainly organic** (comprising of 60 – 80%); **low calorific value.**



The current rate of daily generating MSW is **1kg/person/day**, forecasting rate in 2025 is **1,3kg/person/day.**



# TRANSPORT AND TRANSFER

## Transport Network

### Transport

- ◆ **Implementing units:**
  - ◆ **Tổng** - CITENCO: 224 vehicles, 4,400 tons/day (53%);
  - 22 Public Service Companies: 262 vehicles, 2.500 tons/day (30%);
  - Industry- Agriculture Cooperative: 38 vehicles, 1.400 tons/day(17%).
- Total: 1,183 employees**

### Meeting points

**973 meeting points**  
 → dense distribution in urban districts, scattered in the rural districts

### Transfer stations

- 26 transfer stations (TTC):**
- 5 stations have a system of environmental treatment
  - 13 stations have been renovated( with treatment system)
  - 8 temporary stations

## TREATMENT TECHNOLOGY

**NĂM 2016**

**8.900 tons/day**

### Treatment technology

- ◆ Landfill (76%)
- ◆ Compost, Recycling (14,7%)
- ◆ Incineration (9,3%)

# TREATMENT OF INDUSTRIAL WASTE AND HAZARDOUS WASTE

2007 – 2017 PERIOD

Industrial waste  
1.500 tons/day  
Hazardous waste:  
374 tons/day

**Treatment technology**

- Recycling (35%)
- Other: incineration, physicochemical...(65%)

## TREATMENT LOCATION

12 facilities which has license for treating hazardous waste- **251 tons/day**.

Treatment facilities in neighboring provinces (**around 34 treatment facilities**).



# TREATMENT OF MEDICAL WASTE

2007 – 2017 PERIOD

22  
tons/day

Treatment tech  
Incineration (100%)

## TREATMENT LOCATION

Incinerator 7 tons/day in Binh Hung Hoa ward,  
Binh Tan district (2.5 ha).

Incinerator 21 tons/day in Dong Thanh ward,  
Hoc Mon district (3.2 ha).

**CALL FOR INVESTMENT  
IN SOLID WASTE TREATMENT**

## THE CITY ORIENTATION OF MSW TREATMENT UNTIL 2025

### Forecast

In 2020: **10,081 tons/day**

In 2025: **12,864 tons/day**

Yearly average increase **5%**

Ho Chi Minh City calls for investment in MSW treatment until 2025:

- Technology: **incineration – energy recovery.**
- Capacity to call for investment until 2025 : **2.000 tons/day.**
- Location: **Phuoc Hiep Solid Waste Treatment Complex, Cu Chi District.**

Note: calling for investment in 01 or 02 project with incineration and energy recovery technology, total treatment capacity is 2,000 tons/day.

## THE CITY ORIENTATION OF INDUSTRIAL-HAZARDOUS WASTE TREATMENT IN 2020-2025 PERIOD

### Forecast

**In 2020: Industrial waste 1,900 tons/day,  
Hazardous waste 600 tons/day**  
**In 2025: Industrial waste 2.500 tons/day,  
Hazardous waste 900 tons/day**  
**Yearly average increase 6%**

Ho Chi Minh City intends to call for investment in 01 project to treat industrial- hazardous waste in 2020-2025 period:

- Technology: **plasma.**
- Capacity: **200 – 500 tons/day.**
- Location: **Phuoc Hiep Solid Waste Treatment Complex, Cu Chi District.**

# THE CITY ORIENTATION OF MEDICAL WASTE TREATMENT IN 2020-2025 PERIOD

## Forecast

- ◆ In 2020: 30 tons/day
  - ◆ In 2025: 50 tons/day
- Yearly average increase 10%

Ho Chi Minh City intends to call for investment in 01 project to treat hazardous medical waste in 2020-2025 period :

- Technology: **plasma.**
- Capacity: **50 tons/day.**
- Location: **Phuoc Hiep Solid Waste Treatment Complex, Cu Chi District.**

## CALL FOR INVESTMENT IN RENOVATING CLOSED LANDFILLS

Landfill	Phuoc Hiep 1	Phuoc Hiep 1A	Phuoc Hiep 2	Go Cat	Dong Thanh
Area(ha)	18.992	9.7	19.5	25	45
Year of closing	2006	2008	2013	2007	2002

Requirements under 02 calling for investment options:

- Develop green top cover for closed landfills for golf course, green parks, etc,
- Transform closed landfills to clean land area for commercial center, residential areas, etc.

## OTHER ISSUES

1. Increase of public awareness.
2. Investment of infrastructure and equipment (GPS, camera...) to strengthen inspection and handling of violations.
3. Application of information technology in solid waste management

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**THANK YOU!**

**MAY 2018**