SOLID WASTE MANAGEMENT AND CALLING-FOR-INVESTMENT PROJECTS FOR 2017-2025 PERIOD
CONTENT

I. Current status of solid waste management in HCMC

II. The orientation of calling for investment in solid waste treatment
I. CURRENT STATUS OF SOLID WASTE MANAGEMENT
**1. GENERAL INFORMATION**

**HO CHI MINH CITY**

- Special urban; Area: 2,095.65 km²
- Population (2017): More than 10 million (including immigrants); **Density: 4,773 ppl/km²**
- GDP growth rate: 8.25% (2017)
- State management system: 24 districts, 322 wards.

**Big pressure on environmental management:**

- Wastewater (1.75 million m³/day);
- Air pollutants (from 7.9 million of transport vehicles and 839 sources of industrial air pollution);
- Solid waste (8,500-9,000 tons/day).
2. MUNICIPAL SOLID WASTE GENERATION SOURCES

AMOUNT IN 2016 ➞ 8,900 tons/day

- **Household**: 1,976,744 households, generating 3,483 tons MSW/day, consisting of 42%.

- Generating sources of MSW *(production facilities, business, commercial and service facilities...)*: 134,640 sources, 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%.
3. CHARACTERISTICS OF MSW OF HCM CITY

MSW has not been separated at source. Piloting in 24 districts with small scale (1 ward 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 1 kg/person/day, forecasting rate in 2025 is 1.3 kg/person/day.
4. TRANSPORT AND TRANSFER

Transport Network

Transport

Meeting points

Transfer stations

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

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

Implementing units:
- Tổng - CITENCO: 224 vehicles, 4,400 tons/day (53%);
- 22 Public Service Companies: 262 vehicles, 2,500 tons/day (30%);
- Industry- Agraculture Cooperative: 38 vehicles, 1,400 tons/day (17%).
Total: 1,183 employees

TREATMENT TECHNOLOGY

NĂM 2016 → 8,900 tons/day → Treatment technology
- Landfill (76%)
- Compost, Recycling (14.7%)
- Incineration (9.3%)
5. 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%)

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

Treatment facilities in neighboring provinces (around 34 treatment facilities).
6. 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).
II. CALL FOR INVESTMENT IN SOLID WASTE TREATMENT
1. 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.
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.
3. 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.
4. CALL FOR INVESTMENT IN RENOVATING CLOSED LANDFILLS

<table>
<thead>
<tr>
<th>Landfill</th>
<th>Phuoc Hiep 1</th>
<th>Phuoc Hiep 1A</th>
<th>Phuoc Hiep 2</th>
<th>Go Cat</th>
<th>Dong Thanh</th>
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<tbody>
<tr>
<td>Area (ha)</td>
<td>18.992</td>
<td>9.7</td>
<td>19.5</td>
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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.
5- 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
MAY 2018

THANK YOU!