

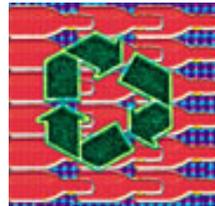


Country Report by
the Royal Thai Government

MAPPING NEEDS AND ACTIVITIES ON WASTE MANAGEMENT

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1. Problems

1.1 Problems of Non-Waste Separation



Co-disposal HW and MSW

Illegal Dumping/Open Dumping



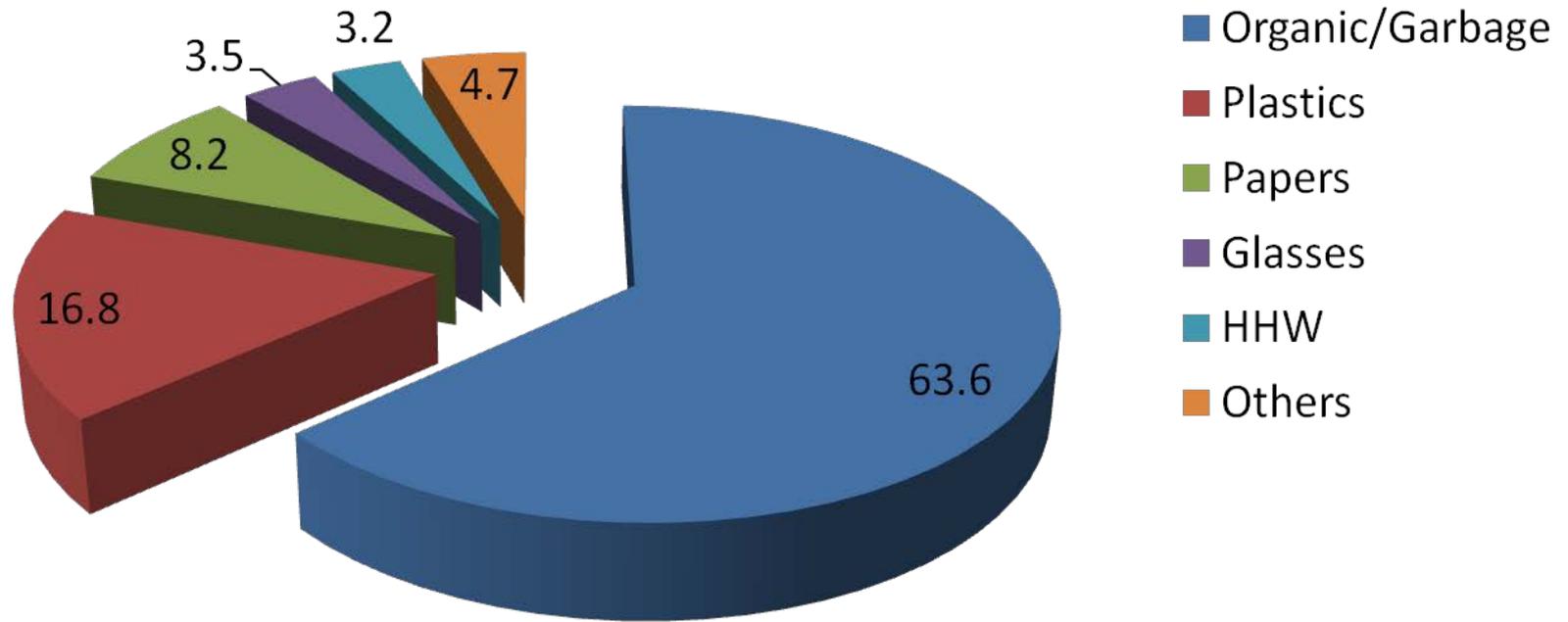
1.2 Problems of Landfill Operations



**No Operational Procedures
No Environmental Controls**



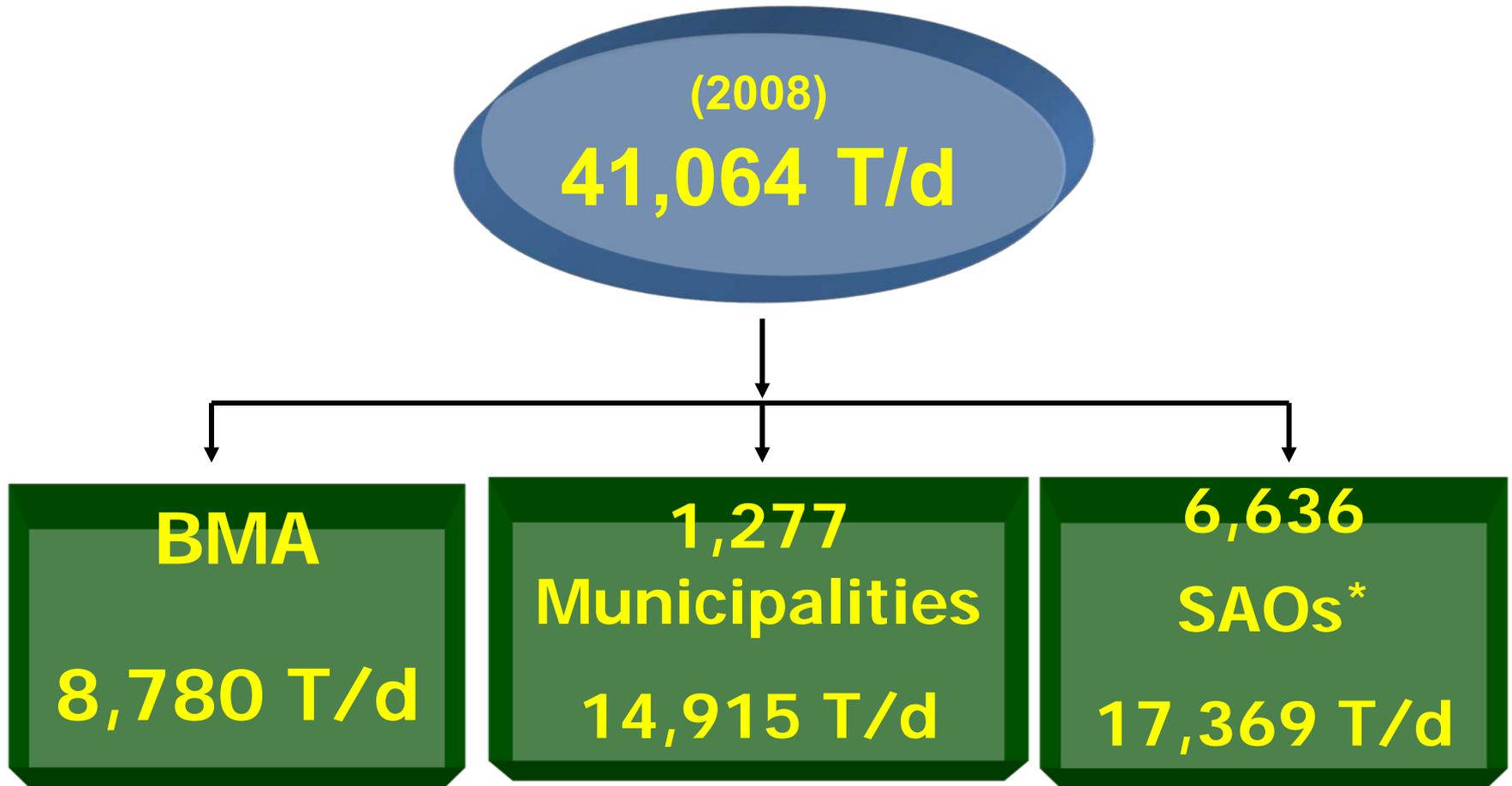
2. Physical Composition of MSW



Remark: 1. Sampled data were sorted at MSW disposal sites.
2. Data shown were statistically average values.

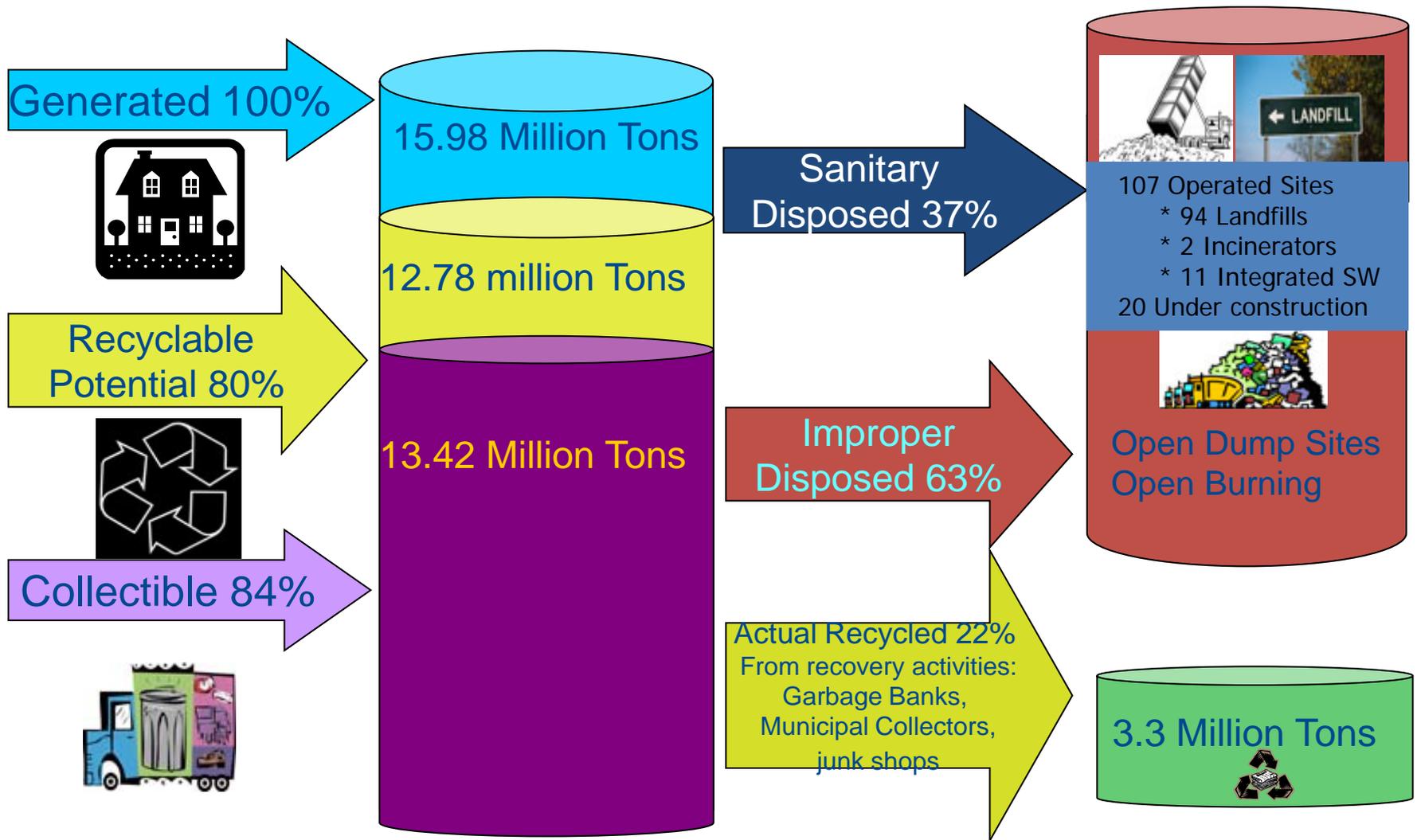
Reference: Pollution Control Department (2004), Study on Physical Composition of MSW

3. Status Quo: Municipal Solid Waste (MSW)



**SAOs = Sub-District Administrative Organizations*

4. Current of MSW Management

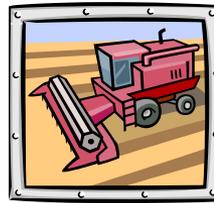


Reference: (Draft) Thailand State of Pollution Report 2011

5. Existing Disposal Facilities in Thailand

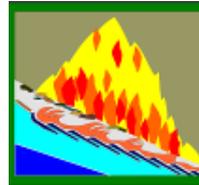


Sanitary Landfill



- ▶ In Operation – 93 sites
- ▶ Never Run – 8 sites
- ▶ Stop Operating – 5 sites
- ▶ Under Construction – 22 sites

Incineration



- ✦ Phuket – 250 tons/day
- ✦ Samui Island – 150 tons/day
- ✦ Lamphun* – 10 tons/day

**Currently disfunction*

Integrated Systems

- ❖ Wieng Fang (Chiang Mai) – 150 tons/day
- ❖ Rayong Municipality – 80 tons/day
- ❖ Chonburi PAO – 400 tons/day
- ❖ Mae Sai (Chiang Rai) – 60 tons/day

6. Laws and Regulations

Public Health Act 1992

National Environmental
Quality Act 1992

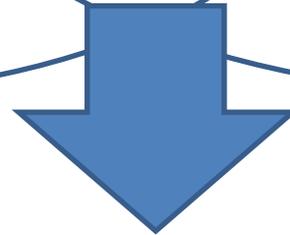
- Decentralize authorities to Local Government
- Service collection fee

Authorization

License to private sector issued by Local Official

- Emission/Effluent standards
- Point source of pollution
- Recording/Reporting data
- Pollution Control Areas

Mechanism



Implementation

Local Governments

PCD Notification

Any relevant technical guidelines/guidance

Approach

7. National Policy and Target

Waste Reductions:

- Applying 3Rs
- Promoting Green Procurement

Waste Utilization
Rate not less than
30% by 2016



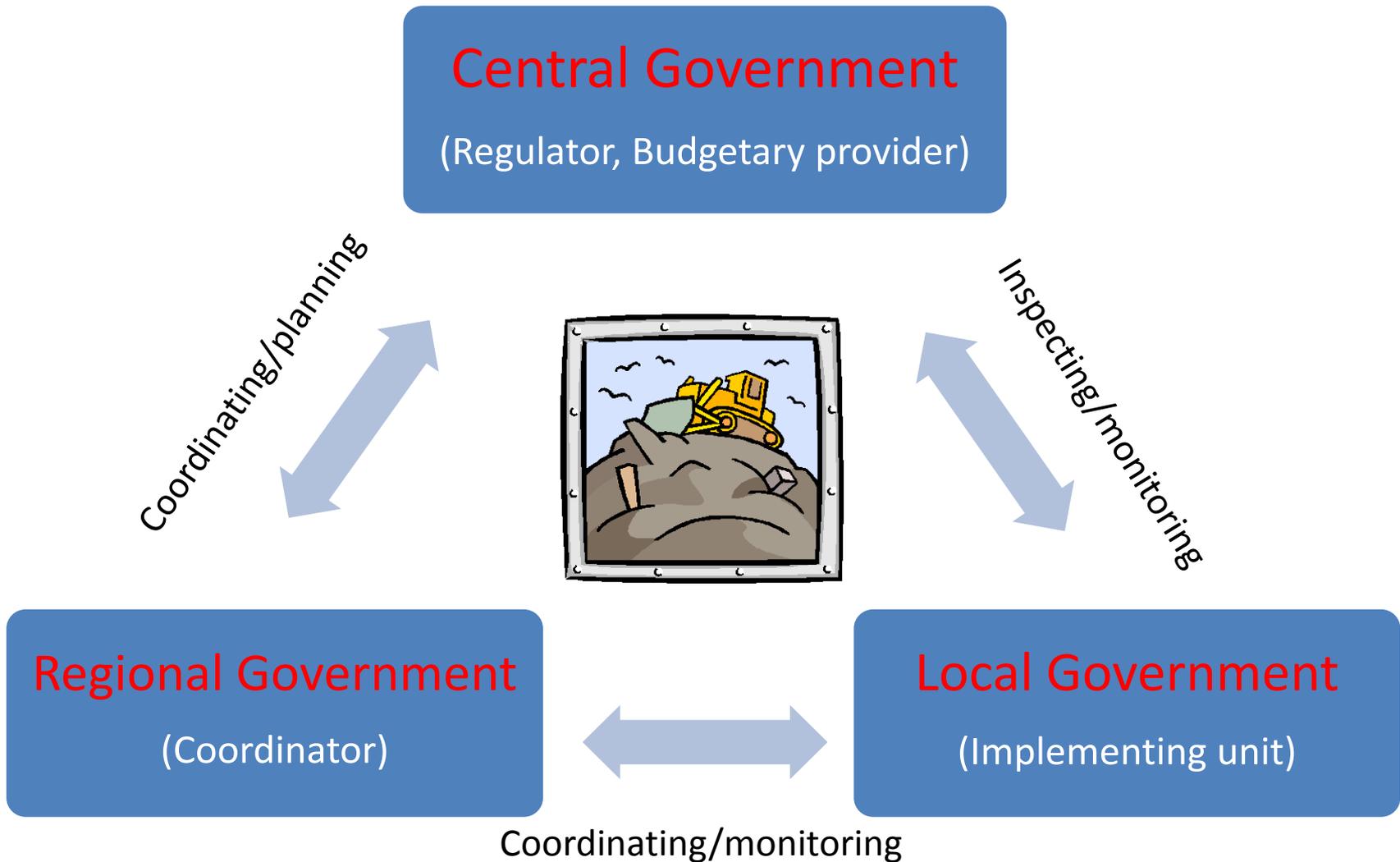
Integrated Waste Management System

Waste Disposal
in sound
practices not
less than 50%
by 2016

Household Hazardous + Infectious Waste Management System



8. Administrative System on Waste Management



Organizational Roles Related to MSW Management

Royal Thai Government

Central Governments

- Formulate policies, targets, regulation, standard and guidelines,

Regional Governments

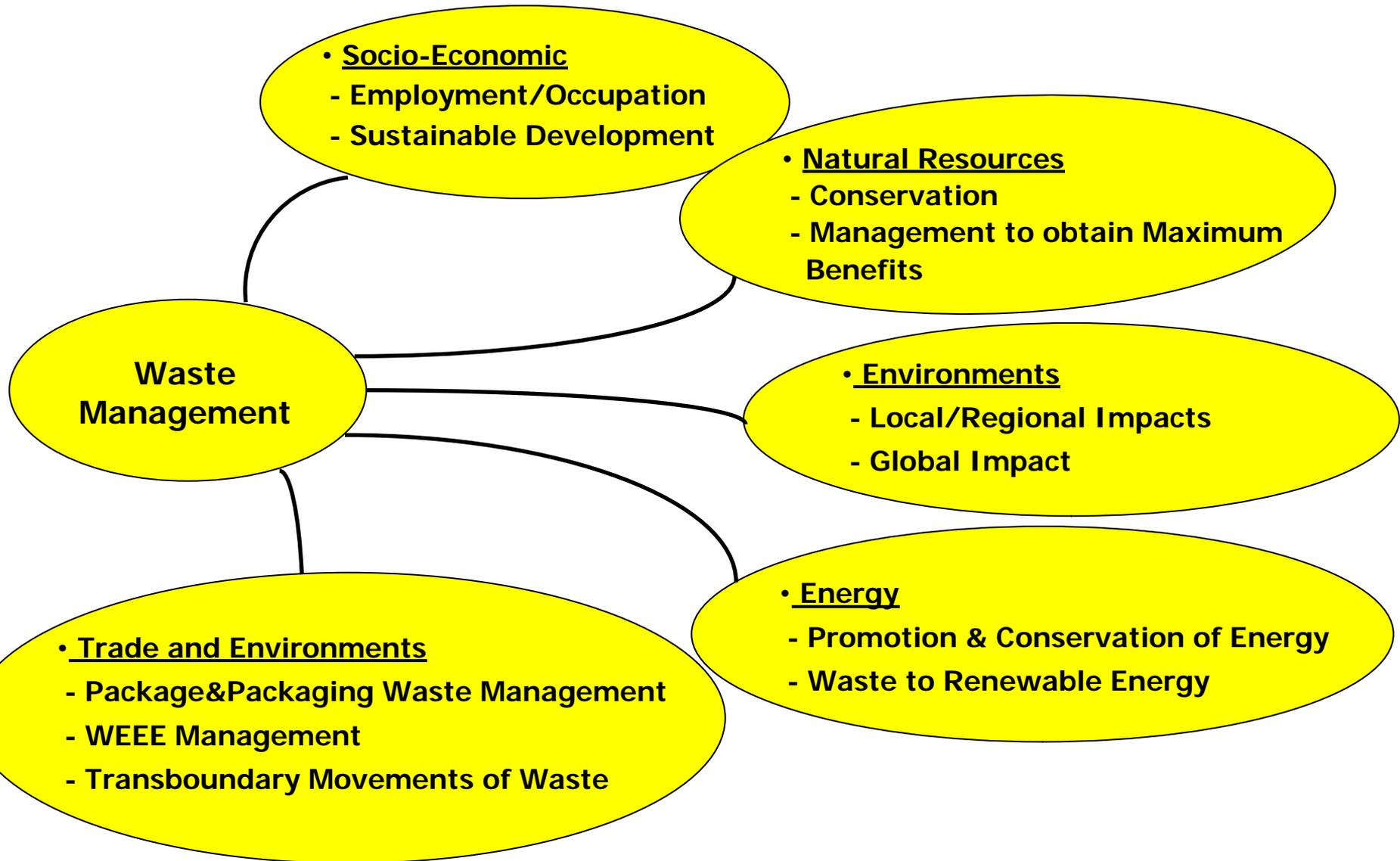
- Coordinate related works between central and local governments.

Local Governments

- Handle waste management within governed area.

Implementation unit

9. Involvement with Relevant Disciplines



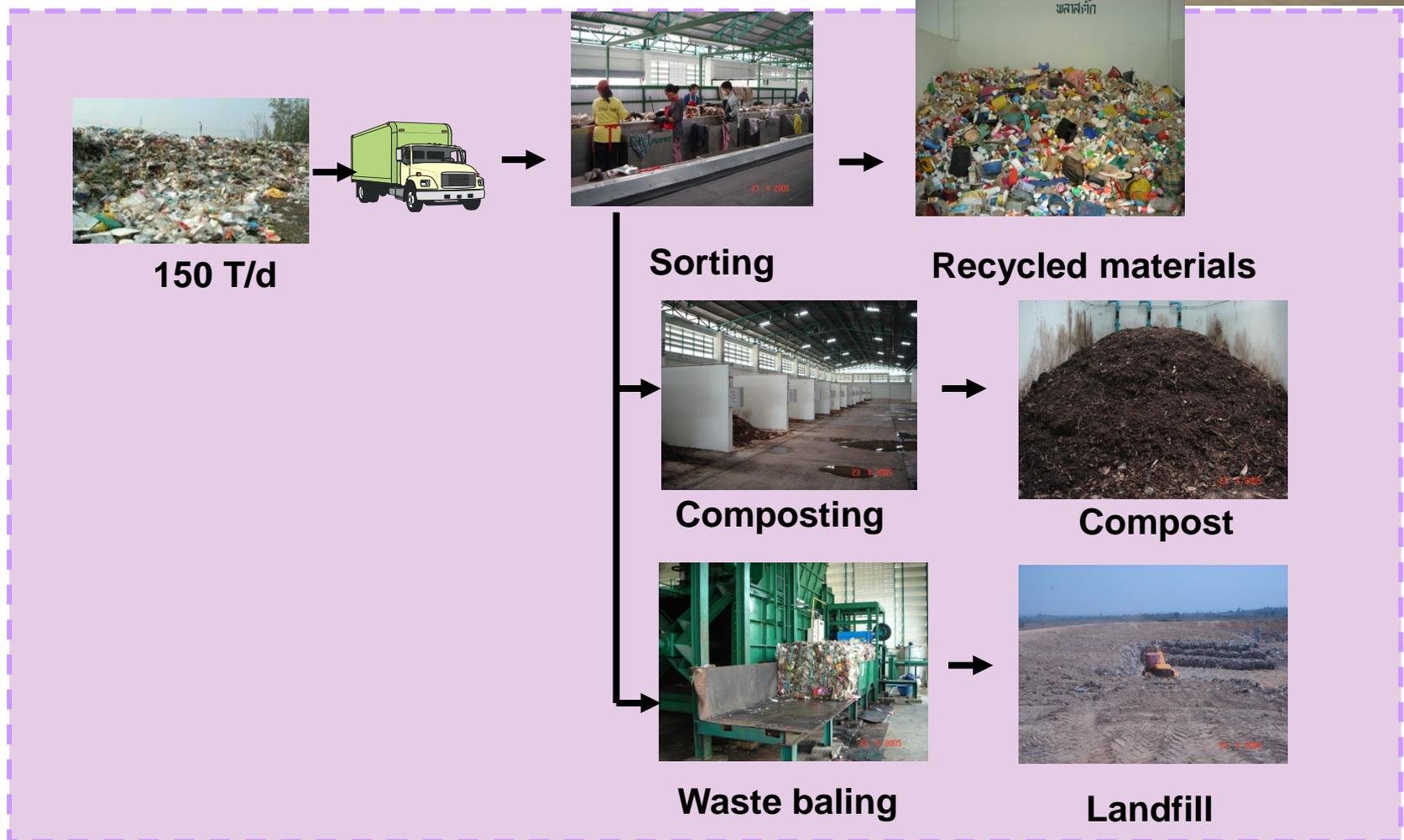
10. Integrated waste management system

- to reduce the landfill areas
- to generate the renewable energy



11. Examples of MSW Projects in Thailand

MSW Disposal Facility : Fang Municipality, Chiang Mai



Organic Waste Compost and Energy Production Plant, Rayong



70-80 T/d



Sorting



↓ Organic waste



Power generated
of 625 kW

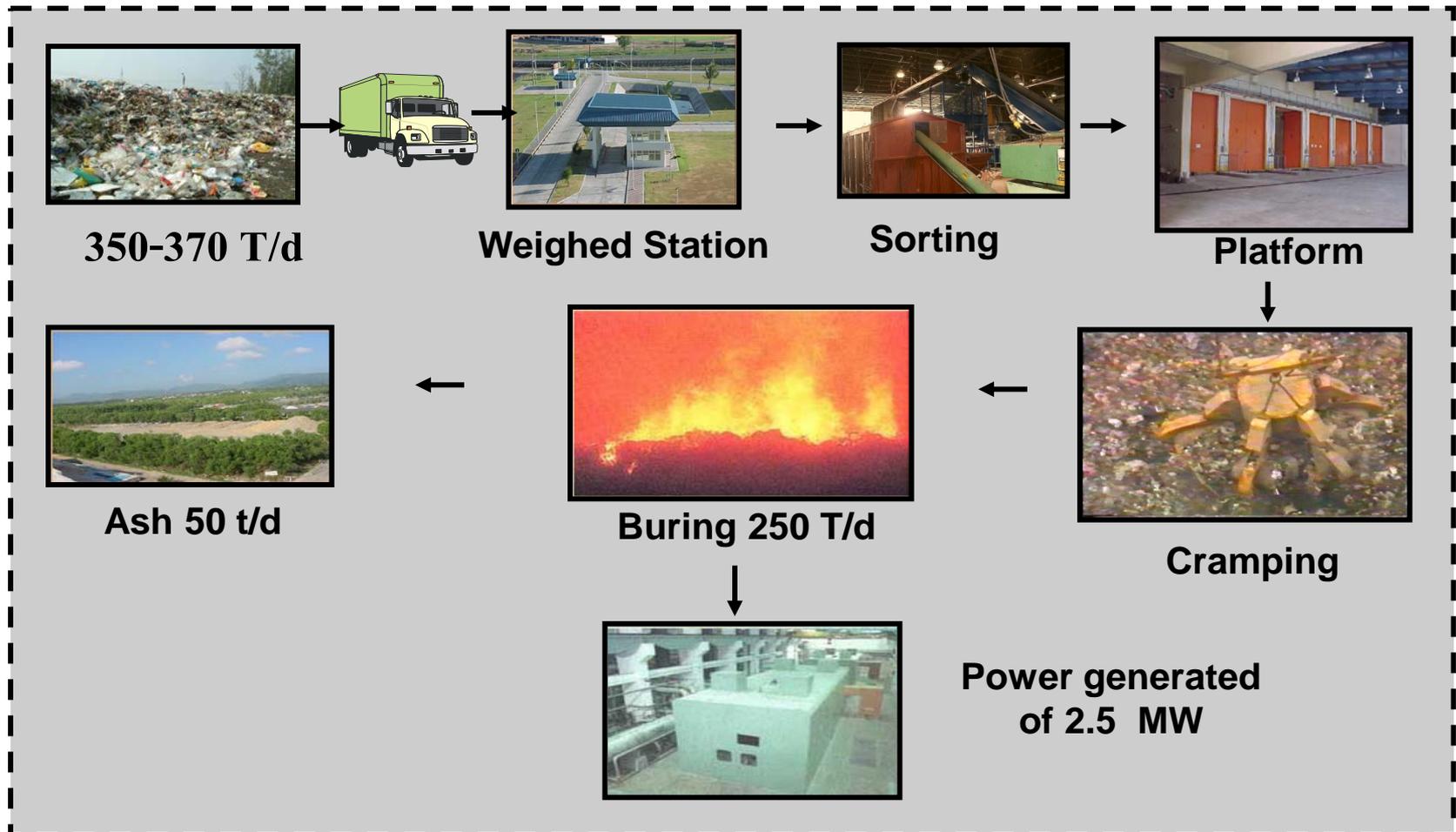


Gas Collection
Tank



Gas Digester

Phuket Incineration Plant



12. Current Activities on Waste Management

International Activities

- **UNEP: Disaster Debris Management**
 - Developing code of practices for relevant stakeholders.
- **Fukuoka Prefectural Government (Japan)**
 - Developing semi-aerobic landfill for small (waste < 20 tons/day) and medium (waste 50 – 100 tons/day) sizes municipalities.
- **UN-ESCAP and IGES (Institute for Global Environmental Strategies)**
 - Capacity building for avoiding GHG on MSW management

National Activities

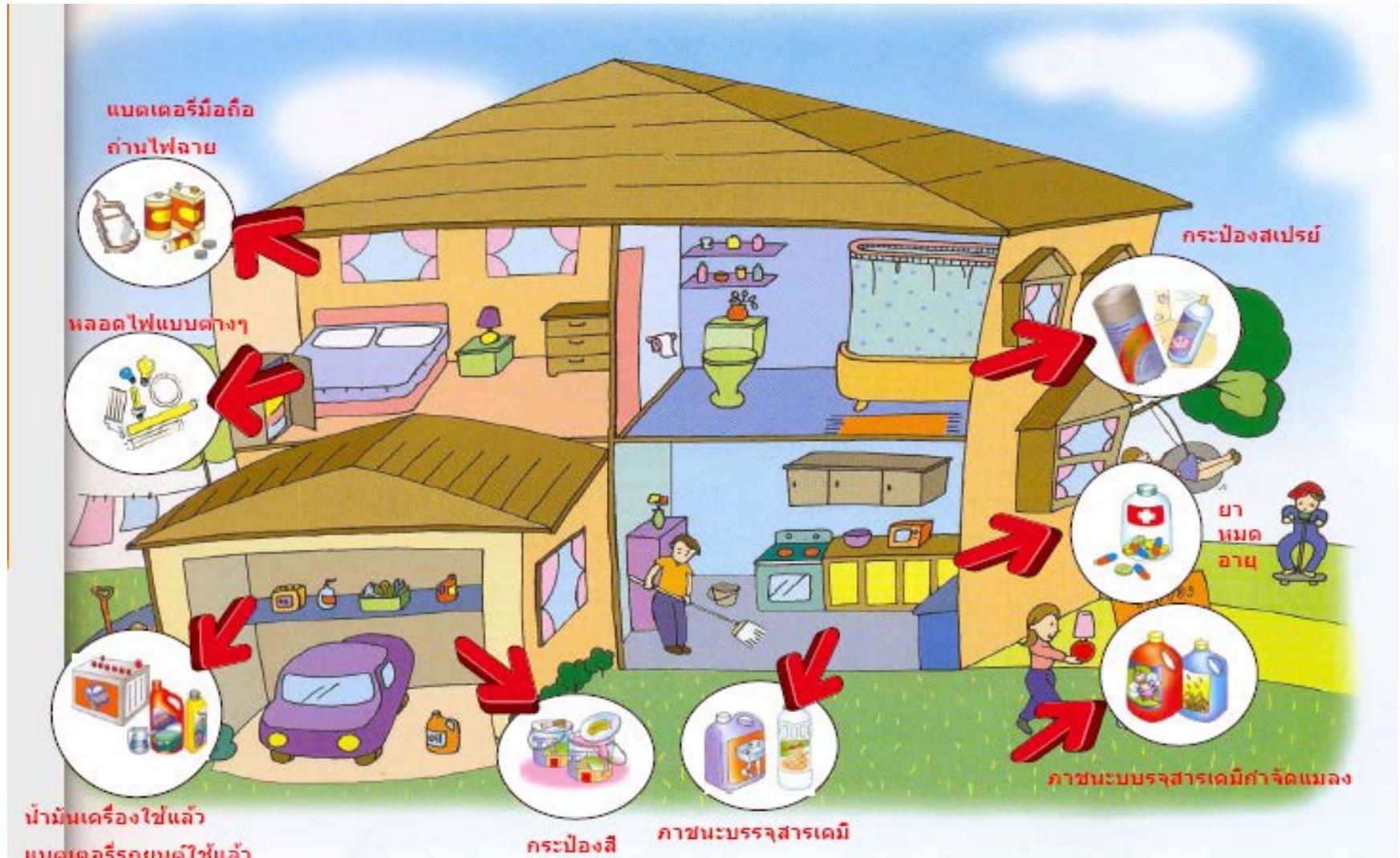
- Developing code of practice for handling MSW management, waste to energy, 3Rs, E-waste, infectious waste
- Supporting local government for improving efficiency of landfill and rehabilitating open dumps.
- Enacting and amending MSW management, 3Rs, household hazardous waste regulations and strategies.
- Building capacity for sustainable MSW and household hazardous waste management of local governments.

13. Needs assessment

- Capacity building and strengthening on:
 - Landfill operation and maintenance
 - Open dumps rehabilitation
 - Waste management by waste to energy
 - WEEE strategies for local government

Household hazardous waste Management in Thailand

1. Source of household hazardous waste



2. Household HW management scheme



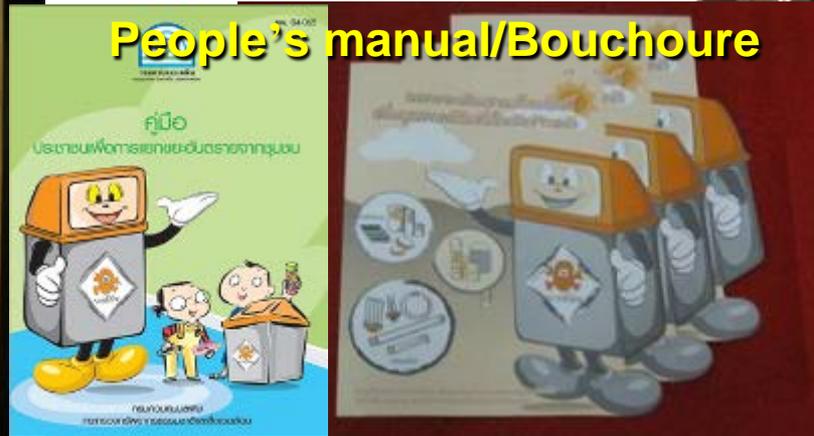
2. Household HW management scheme

1. Awareness Raising

HHW's Campaign Poster



People's manual/Bouchoire



HHW Mascot "Mr. Toxic"



People learn "What is HHW?" from playing games in community's festival.



A Famous Singer assist PCD to promote HHW management in the Community



2. Separation Methods

- ▶ Door to Door
- ▶ Drop Off
- ▶ Special Day

Drop off designated point



Door to door collection



Special collection day

Separated HHW by Drop Off



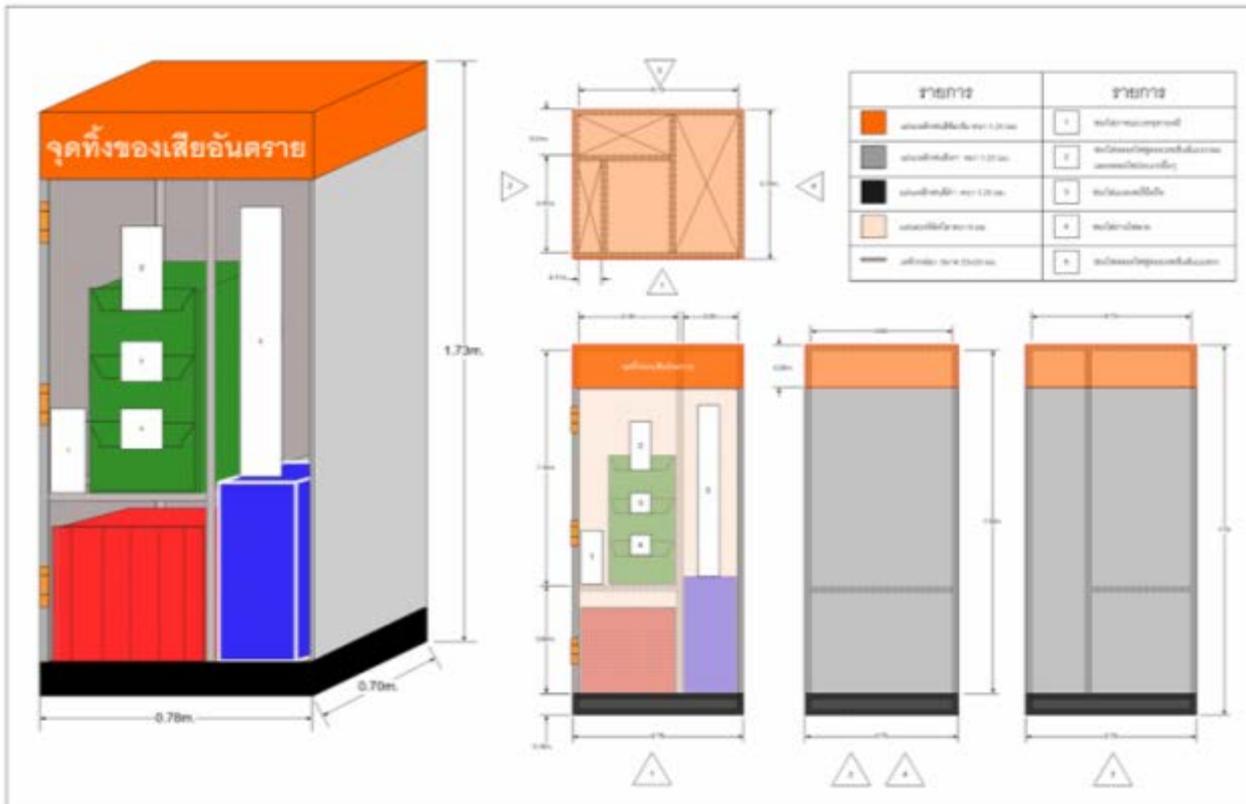
Drop Off Centers



Community center



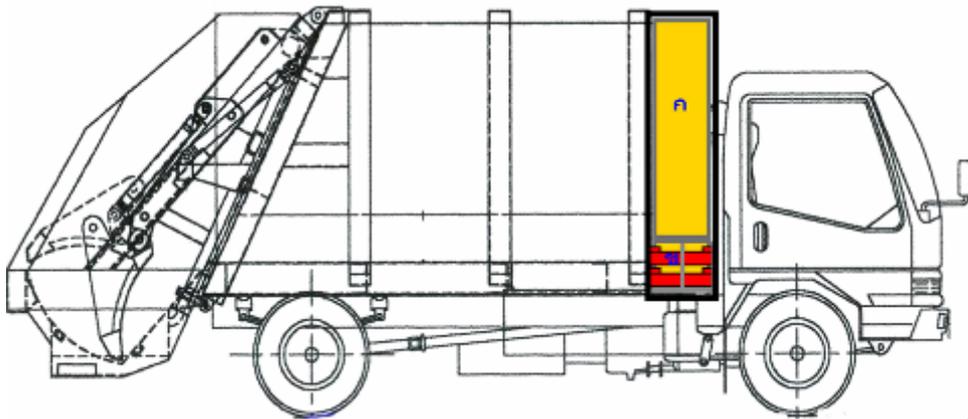
Drop Off Container Generation 2



3. Collection



Vehicles



กล่องเก็บของเสียอันตราย
ในรถเก็บขนขยะมูลฝอยทั่วไป

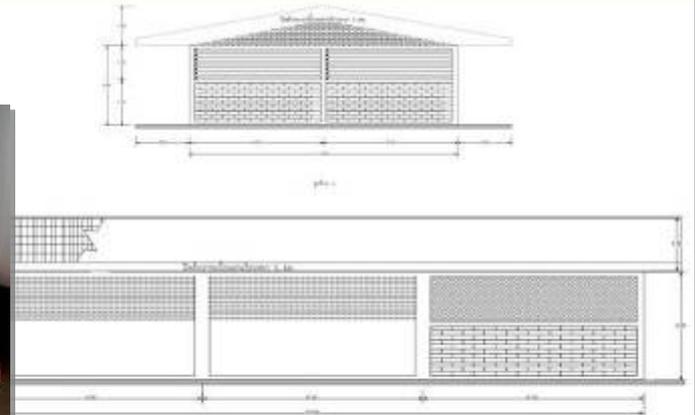


รถจัดเก็บเฉพาะของเสียอันตราย
เขตดินแดง



รถจัดเก็บเฉพาะของเสียอันตราย
เทศบาลนครพิบูลย์โลก

4. Temporary Storage



5. Transportation to Recycling or Disposal Facilities



▶ **Only by permitted transporters**

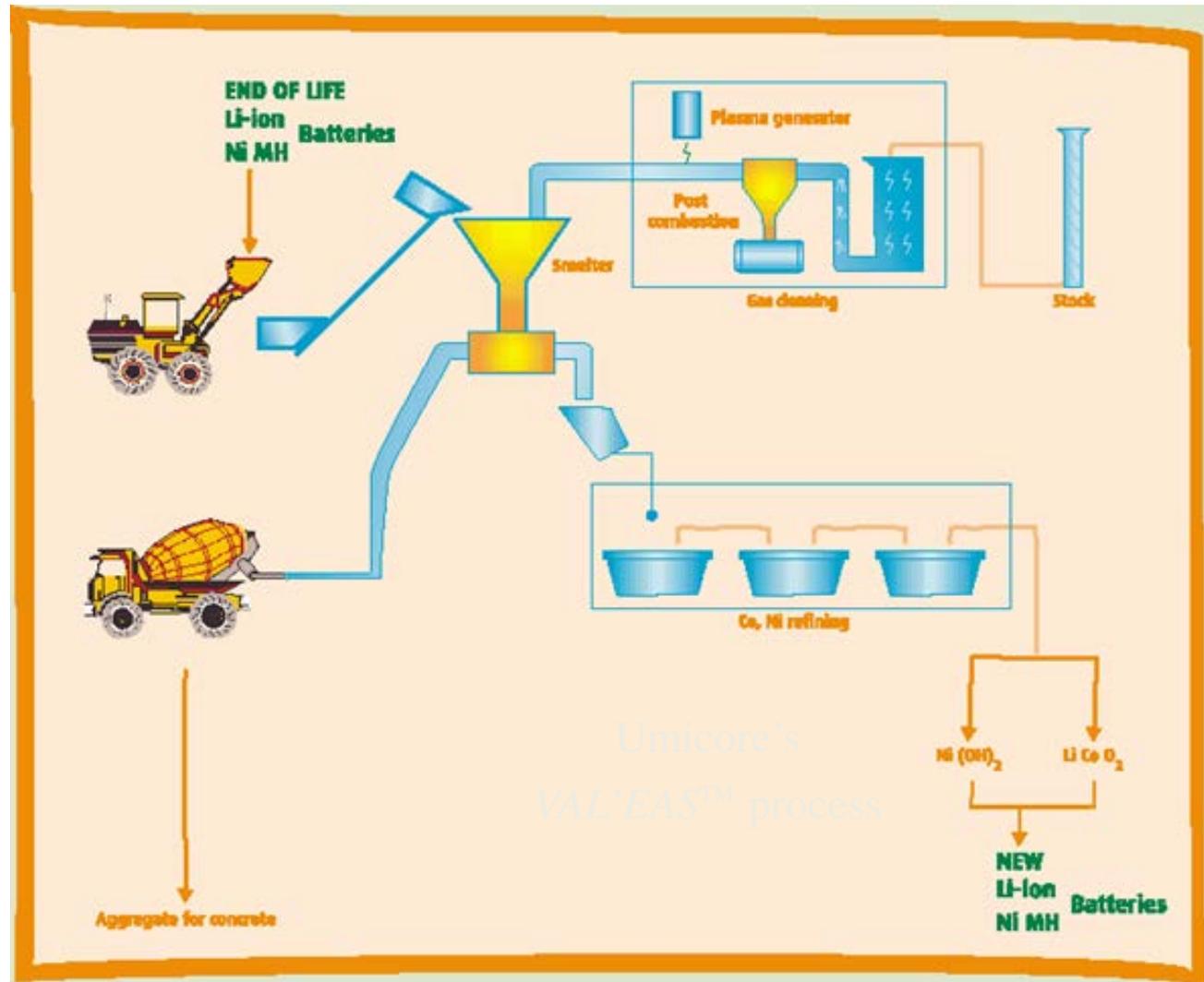
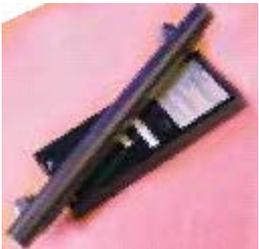
6. Recycling



▶ Only by permitted recycling facilities

Li-ion
NiMH

The unique Closed Loop Solution for batteries: VAL'EASTM



7. Disposal

Stabilization and Solidification Unit

