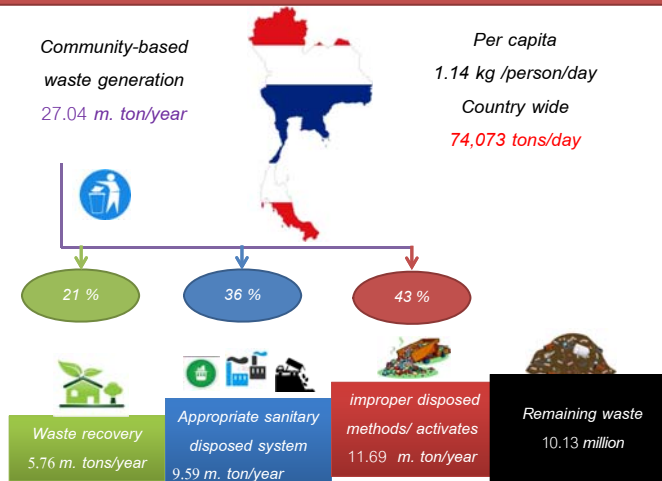


Solid Waste Management in Thailand: Policy and Implementation

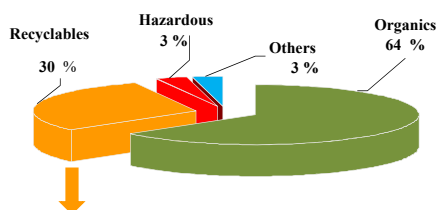


Dr. Wijarn Simachaya
Permanent Secretary
Ministry of Natural Resources and Environment

Situation of municipal solid waste management in Thailand 2016



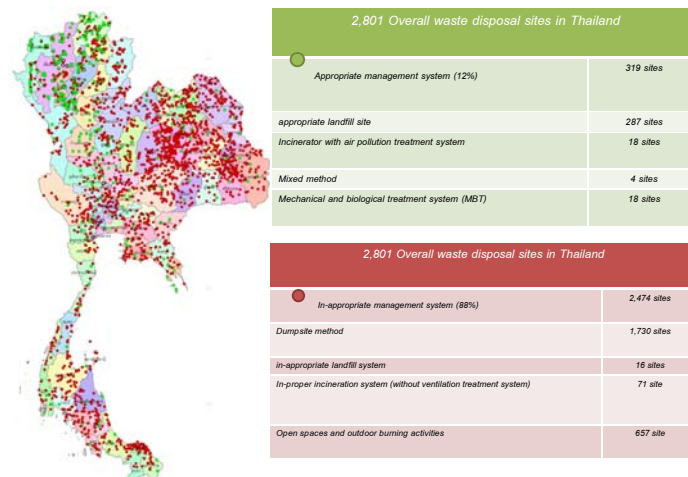
Waste Composition



- Plastic 17% (2.5 mt) Plastic bag, foam and other packaging
- Paper 8% (1.1 mt) News paper, magazine, Paper packaging
- Glass 3% (0.4 mt) Glass container and packaging, one-way products
- Metal and aluminum 2% (0.3 mt) packaging and container

Source : Thailand State of Pollution Report 2015 3

Waste disposal sites in Thailand (2016)



National Agenda on Waste Management

2014

Road Map on Waste and Hazardous Waste Management

Approved by the National Council for Peace and Order on the 26th August 2014

2016

National Solid Waste Management Master Plan (2016 - 2021)

Approved by the cabinet on the 3rd May 2016

2016

Action Plan "Thailand Zero Waste" (2016 – 2017)

According to the Participatory State Principle
Approved by the cabinet on the 20th September 2016

Principle of SWM Roadmap

- Reduced amount of accumulated waste
- Promoted appropriate MSW and Hazardous Waste Management
- Specific law on SW Management
- Instill National Discipline

National Waste Management Master Plan 2016- 2021

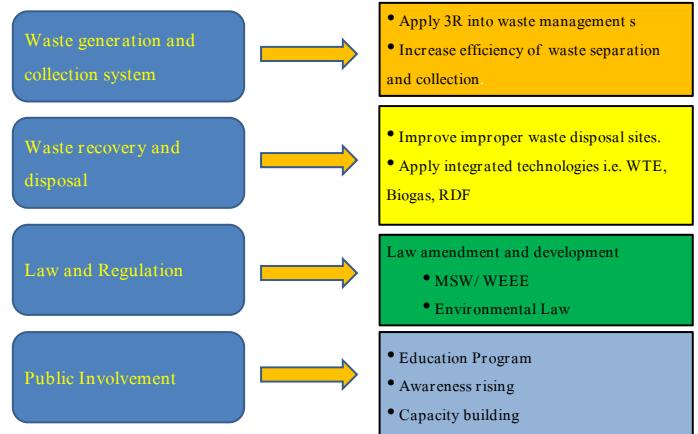


The Cabinet approved the plan on the 3rd of May 2016

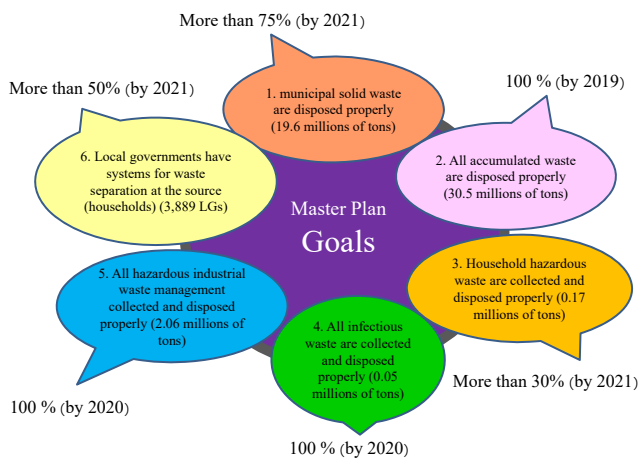


National Waste Management Master Plan

(2016 – 2021)



National Waste Management Master Plan

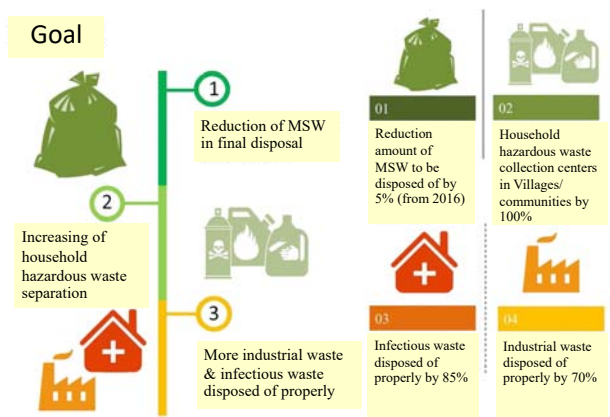


Action plan “Thailand Zero Waste”



Action Plan “Thailand Zero Waste” (2016 – 2017) According to the Participatory State Principle

Action plan goal and target



Role of related agencies



Master plan of solid waste management in Thailand 2016-2021

(The government approved the agreement in May)

Direction

3R Principle: Reduce Reuse Recycle:

Appropriate management, waste centralization disposal, waste-to-energy

Public Participation & Social Responsibility

Solid waste and hazardous waste management measurement

1. Waste minimization at source

❖ Separation & recovery
❖ SCP concepts: environmental friendly production, consumption & services

2. Capacity Enhancement

❖ Waste collection, transportation and disposal
❖ Solid waste disposal centre
❖ Waste collection and disposal site
❖ Law and regulation improvement
❖ Law enforcements

3. Management Promotion

❖ Public awareness & consciousness building
❖ Knowledge enhancement
❖ Treatment and disposal technology
❖ Databased development
❖ Management incentives & motivations

Goals

Zero remaining waste 100 % by 2019

Zero infectious waste 100 % by 2020

Zero Industrial hazardous waste 100 % by 2020

Municipal hazardous waste reduction > 30 % by 2021

Waste separation at source > 50 % by 2021

Minimize municipal solid waste > 75 % by 2021

Zero Waste Action Plan and Civil State: The Nexus Clean City and Happy People Action Plan.

approve of agreement under the government on 20 September 2016

Solid waste situation

Solid waste generated

26.85 m. ton

Municipal collection

15.49 m. ton

Municipal 3R benefit

4.94 m. ton

Sanitary disposed

8.29 m. ton

Infectious waste

52,147 ton

Industrial hazardous waste

2.06 m. ton

Hazardous waste situation 0.58 m. ton

generated Per capita 1.13 kg/day

vision

Joining hand in hand in proper waste management for better quality of life & environmental friendly towards green & happiness city

Government policy

NCPO approve on 26 Aug 2014

NCPO approve 19 Aug. 2014

Gov. approved on 12 May. 2015

Gov. approved on 16 June. 2015

Gov. approved on 3 May 2016

Gov. approved on 20 Sep 2016

Basic principal

3R eduse reuse recycle

Government

Private Sector

Civil Society

Education Sector

Religion Sector

Civil state

implementation strategy

will bring all sector to participate

in waste reduction & source

separation principle

SWM Roadmap

MOI: Country's SWM Key Agency

SWM country master plan

Zero Waste Master Plan

Zero waste Action Plan

Framework

Focus on waste management at source; waste reduction & separation including efficiency waste collection

Goal

Reduce 50% of community waste go to disposal site

100% of facility Community establish the hazardous waste collection center

100% of industrial waste & 80% of infectious waste was proper dispose increasingly

Measure

1. SWM at source

2. SWM inter-media

3. consciousness and sustainable

4. Data base system

Solid waste management: Driven Mechanisms

Waste management Laws

Public Sanitary and Oder Act, B.E. 2560

The Bill of the Remains of Electronic Appliances and Electronics Equipment Management Act B.E. ...

the Bill of National Waste Management B.E....

the Bill on waste minimization and utilization promotion B.E....

Mechanism of Solid waste management policy supervising.

Management mechanisms

Economic Instrument

Laws and regulations

Social Mechanism

Supporting

Linkage Mechanism

- Committee and sub-committee of Master Plan supervision & implementation
- Provincial sub-committee for waste management supervision & implementation

The implementation of 3R Policies Laws and Regulations.

Initiating (draft) strategy on promoting of Reduce Reuse Recycle : 3R

- providing the framework guidelines for 3R implementation
- emphasizing on the minimum amount of waste at sources and the final disposal
- maximizing the values of natural resources

Initiating (draft) Country's Waste Reduction and Recycling Promotion Act

- supporting law and regulation of related agencies
- enhancing the reference framework for support and applicable guidelines on 3R activities

Zero Waste Action Plan and Civil State: The Nexus Clean City and Happy People Action Plan.

- Implementation and action plan under the Civil State approaches
- Up-scale public awareness and participation on waste reduction and waste separation according to 3R principle.



Ministry of Natural Resources and Environment (MNRE) The Department Core Activities

Solid and Hazardous wastes reduction and separation project

16 departmental organizations of MNRE 's 3R operation includes:

- Inter departments wastes separation
- Zero Polystyrene food packaging
- Reducing the amount of wastes for disposal – at sources
- Reducing plastic bags and disposable food containers



3R Activities: The Examples

➤ End of life product disposal - voluntary project

• End of life products

- Donation of aluminum (pull-tab lid) to make prosthetic limbs
- Green roof project

• fluorescent tube



• mobile phone and battery



3R Activities: The Examples

➤ Setting-up junk shop entrepreneurship managerial efficiency for waste management



Public Participation Promotion

Public Participation Promotion
& Campaign on
waste management
in local levels nationwide
(76 Provinces)

Country's Discipline &
public participation promotion
towards sustainable waste & environmental management programme



Waste management at source



Waste Collection & Transportation



Properly Waste Disposal

Community based waste management activity



- Organic waste for composting, earthworm farming
- Selling the recyclable waste to the recyclable shop
- Collect & let the remaining waste to the disposal site by the local administration

Reduce

No plastic bag & container promotion: textile bag

& wooden basket promotion



Recycle waste bank



Zero bath shop & grocery



- The shop accept only recyclable waste materials as payment for the purchased grocery items



Charitable activities like recyclable waste materials donation for Buddhist



Hazardous waste collection point



Public Involvement



Conclusion

- **Country Strategy – local action**
- **Waste is waste**
- **Lesson learned – City to City**
- **Strong Local Authority Involvement**
- **Waste to energy**
- **Leader's Vision**



Thank you for your attention