

# A Critical Review on Waste Management and Recycling Policy in Thailand

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#### **IGES-SCP**

Waste and Recycling in Thailand



#### **Outline**

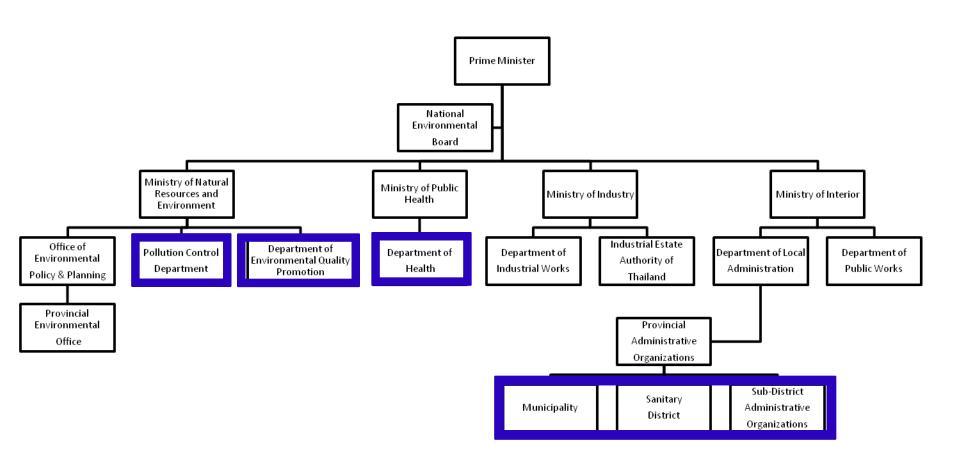
- Overview of waste management
- Overview of recycling business
- Sustainability of recycling business in Thailand



# **Overview of waste management**



# Administrative Structure related with waste management in Thailand





# National Policy and Regulation related to municipal solid waste

- Regarding the sufficiency economy approach, the 3Rs (reduce, reuse, recycle) is promoted.
  - Reducing waste generation
  - Enhancing waste utilization and recycling
  - Promoting waste to energy
  - Reducing GHG emissions from waste management
- Prioritizing integrated waste management and a cluster approach for establishing joint waste treatment facility for local authorities
- Drafting a new law to promote 3Rs implementation and waste separation at source
- Due to the decentralization law, local governments are authorised to announce the local policy and regulation on waste management but it should not be contradicted with the national law.



#### **Current situation of municipal solid waste management**

Indicators	Planned (2016)	Achievement (2013)
1. Waste generation	<1.0 kg/capita/day	1.15
2. Recycling rate	30%	19%
3. Proper disposal	50%	27%
4. Collection rate	-	54%



# Overview of recycling business



## Overview of recycling business

- Mainly carried out by private sector with no subsidy from the government.
- Recyclables comprise approximately 30% of municipal solid waste: 17% plastics, 8% paper, 3% glass, and 2% metals and aluminium.
- Recyclables are generally separated by individuals and sold to waste buyers located nearby.
- Discarded recyclables are segregated by waste pickers, collection crews, etc.
- There is no formal recyclable waste collection for municipal solid waste.
- Several initiatives are used to promote separation of recyclables in communities, schools, slums, organizations: recycling for eggs, waste bank, waste donation event, appointed waste market, etc.



#### Community based recyclable waste separation



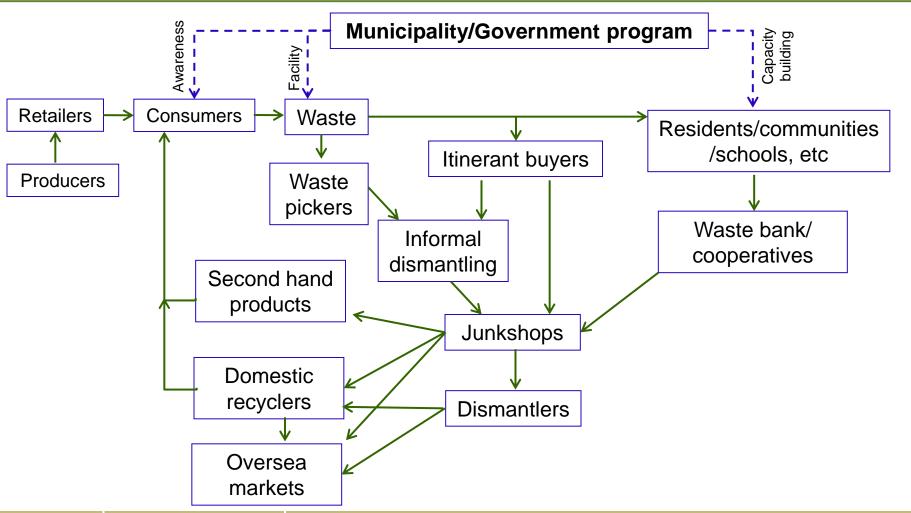








#### Flow of recyclables in Thailand





#### Recycling business models of supply side in Thailand

- Conventional business model: focused on monetary profits with less attention to social and environment
  - a) Buyers of multiple types of recyclables
  - b) Buyers of single type of recyclables
- 2) Wongpanit business model: highlighted social and environmental benefits for public outreach



# Uniqueness of Wongpanit business model – key successful factor

- Highlighted monetary value of recyclables for increasing public interest waste is gold
- Cooperated with local governments in promoting recyclable waste separation at source for sale
- Provided capacity building services to various stakeholders: residents, communities, governments, investors
- Used a franchise system to extension and scaling up of business open opportunities to new entrants
- Increased value of recyclables to fine segregation of recyclables to meet recycler's requirement
- Announced real time buying price to public making it fairs to sellers
- Purchased all recyclables and identified opportunities in new recyclable materials
- Offered training and job opportunities to disadvantage groups



## Practical training on segregation of recyclables





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www.wongpanit.com/wpnnew/eng/index.php





# Sustainability of recycling business in Thailand



#### **Economic aspect**

#### According to estimation of the Pollution Control Department in 2009

- Generated a total income of 1,300 million USD/year
- Creating jobs for
  - 10,200 waste buyer shops
  - 110,070 itinerants (mobile waste buyers)
  - 50,000 employed workers
  - Numerous numbers of waste pickers
  - Alternative income for residents, children, communities, schools, etc.
- More people is engaged on recycling business due to its profitability



#### **Environmental aspect**

- Waste buyer shops must registered to the local governments
- PCD provided training on 'green junkshop project' since 2009
- More than 1,200 waste buyer shops were trained
- Award and financial incentive are given to trained waste buyer shops that have improved the shops according to standard of PCD
- However, there are reported on environmental and health risk from recycling practices especially on e-waste dismantling
- Therefore, the government need to increase awareness and train waste buyers and dismantlers on these issues.



## Social aspect

Public awareness on recycling for environment has been promoted. It
helps improve social status of people engaged on recycling practices.
Nowadays, many educated people are engaged on this business.





#### Driving forces of recycling business in Thailand

- Economic value of recyclables market price and profits
- Social movements regarding the environment and socio-economic development
  - NGOs, communities
- Government policies
  - Sufficiency economy
  - 3R promotion policy



## **Challenges and recommendations**

Challenges	Recommendations
1. Lack of regulations or enforcement to promote recyclable waste separation at source	<ul> <li>A national scheme to promote and enforce the implementation of recyclable waste separation at source</li> <li>Local regulation to enhance implementation of recyclable waste separation at source</li> </ul>
2. Lack of awareness of both residents and businesses and lack of business skills	<ul> <li>A national policy or regulation on waste separation at source for recycling and increase recycling target</li> <li>Awareness raising campaigns on waste separation and strategy to improve social status of stakeholders engaged in recycling business</li> <li>Training for waste pickers, small scale waste buyers, etc.</li> <li>Standard for safe operation and environmental control of waste buyers and recyclers</li> <li>Technical supports to upgrade recycling practices and facilities</li> </ul>



#### Recommendations

Challenges	Recommendations
3. Unfavourable tax system	<ul> <li>Special tax exemption or reduction for recycling businesses that meet criteria on environmental standards and/or providing social services</li> <li>Reconsidering the tax calculation system to motivate businesses to keep concise records of recyclables</li> </ul>
4. Weak coordination among stakeholders	<ul> <li>Increase coordination between the government (both national and local), private sectors, NGOs and waste pickers → partnership, union,</li> </ul>
5. Lack of access to financing	<ul> <li>Establishment of financing system to facilitate improvement of recycling business, e.g. concessional loans, tax exemptions.</li> <li>Microfinance scheme for individual and SMEs</li> <li>Grant for research and technology innovation</li> </ul>



#### Recommendations

Challenges	Recommendations
6. Vulnerability of recyclable market	<ul> <li>A system for real time price notification</li> <li>A mechanism to promote use of recycled products</li> </ul>
7. Lack of access to market data	<ul> <li>A database of scrap dealers and recyclers</li> <li>A database of price change over time to support market analysis</li> <li>A real time price notification through IT such as mobile device, etc</li> </ul>
8. Labour shortage	<ul> <li>Improving working condition of labourers in this area         <ul> <li>Protective gears, health and life insurance and other services</li> <li>Guideline and standard for facility's management</li> </ul> </li> </ul>



#### Conclusions

- Recycling is promoted in Thailand as a part of the 3Rs for waste management. However, the recycling is mainly invested by private sector with no financial support from the government.
- The government supports on recycling business is mainly on policy instrument, awareness raising, and cooperation with waste buyers.
- A national project on 'green junkshop' is to improve the sanitation and reduce negative environmental impacts from waste buyer shops.
- There are many challenges remained to effectively scaling up the recycling business to achieve the national target.