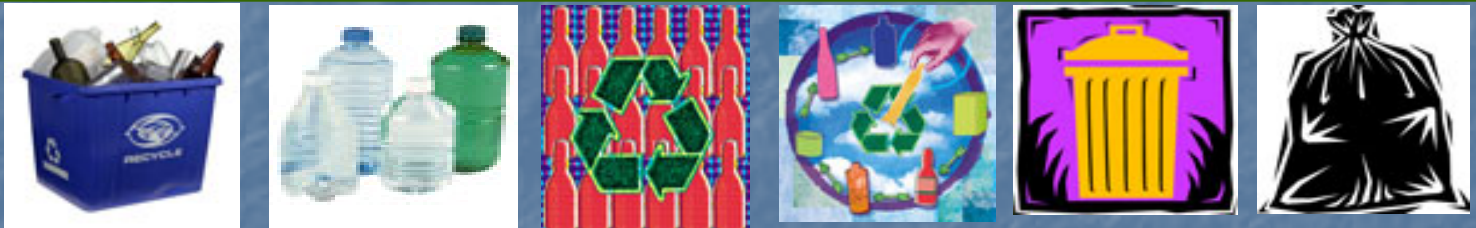




Priority for 3Rs Implementations in Thailand



**Pollution Control Department
Ministry of Natural Resources and Environment,
Thailand**



Municipal Waste Management

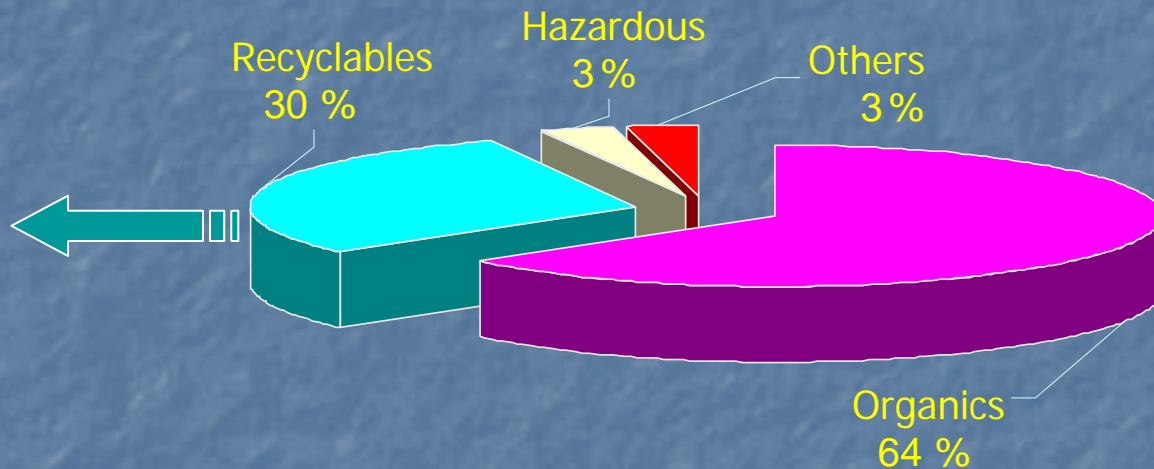
- Waste generation 14.7 million tons/year
- Waste composition

- 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





Municipal Waste Management

Waste Recovery

Total 8,739 t/d (3.19 Mt/year)
approximately 21.6 % of total generation

- Municipality 5,352 t/d
 - Junk shop 4,793 t/d
 - Composting 548 t/d

- Business 3,387 t/d
(Deposit-refund systems,
take back programs)



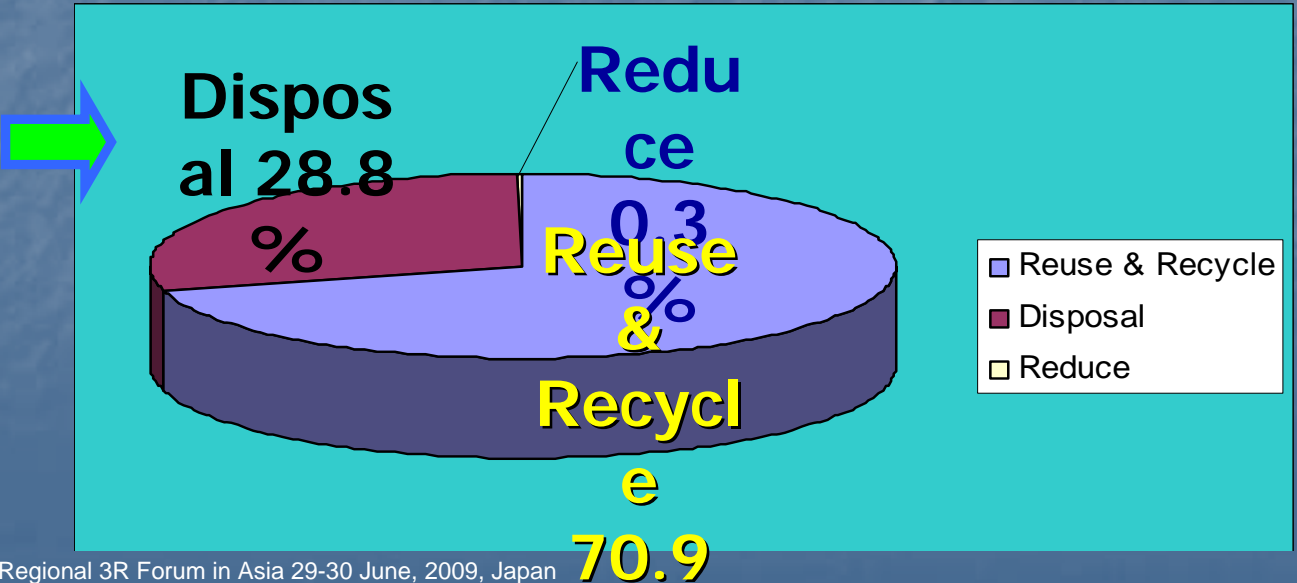
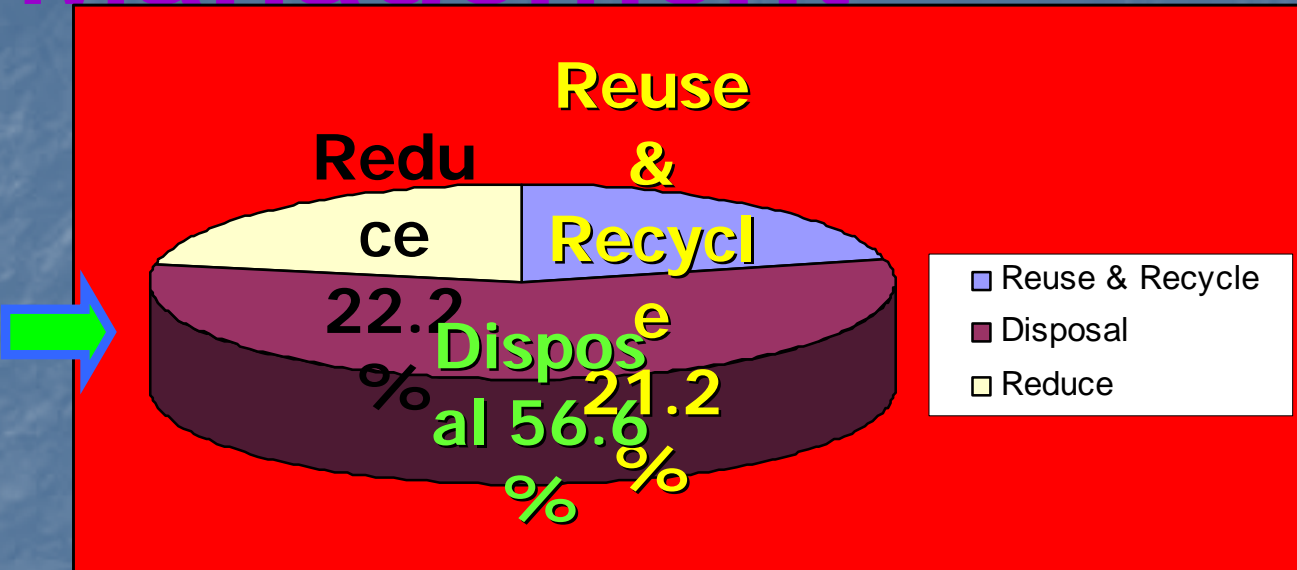


Industrial Waste Management

Industrial Waste
19,914 MT

Hazardous Waste 1,559 MT (19.95%)

Non-hazardous Waste 8,685 MT





Progress in 3Rs Implementations

• National 3Rs Strategy Development

- Supported by UNEP RRC.AP under Advance Waste Management in Asia and the Pacific (AWMAP)
- **Objective** : To develop national 3R policy, goal and strategies as a direction of environmental sound management of wastes for all stakeholders
- **3Rs strategies**: Various techniques and tools are applied to promote Recycle Oriented Society including awareness rising, R&D, technology development, economy instruments and regulation



National 3Rs strategy

Production

- Waste reduction programs (Eco-design/CT/CP/environmental labels)

- Promote reuse and

- Promote recycling-oriented society
- Promote use of green products
- Promote separation and take-back friendly products

- Support community-based recycling

- Capacity building on 3Rs and waste management
- Promote privatization

- Promote cooperation among stakeholders

- Standard and guideline for pollution

Distribution and Consumption

Recycling, Treatment and Disposal



3Rs Target and goal

1. Waste reduction: Reduce solid waste generation by 1-5 %

2. Community waste separation and recovery:

Waste Type	Short term (by 2013)	Long term (by 2018)
- Organic	5	20
- Recyclable	20	25
- Others (waste plastic/foam /wood)	5	10
Total (%)	30	55



Progress in 3Rs Implementations

• National 3Rs Conference

To disseminate 3Rs principle, concepts and strategies as well as transfer knowledge experience and best practices among government business and NGOs

• 3R Regulation development

To develop master law for promotion of waste reduction, reuse and recycling from up stream processes to final disposal



Preparatory Meeting for the Inaugural Meeting of the Regional 3R Forum in Asia 29-30 June, 2009, Japan





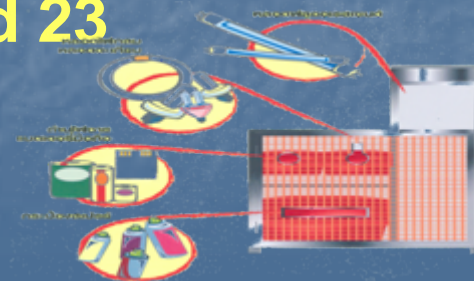
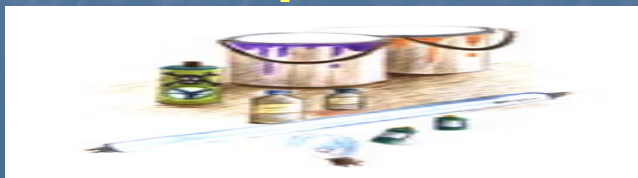
Progress in 3Rs Implementations

• Hazardous waste management

- **E-waste inventory**: Funded by Ministry of the Environment, Japan and cooperation with Electric and Electronics Institute to survey 6 types of e-wastes from cradle to grave and to recommend effective management



- **Household Hazardous waste** : To promote system management from source separation to recycling and disposal targeted in Bangkok metropolis and 23 major municipalities





Progress in 3Rs Implementations

- Community waste recovery practices
 - Over 250 communities implement the 3Rs activities such as composting, waste donation and community recyclable center
 - In school recyclable bank 1,200 schools





Progress in 3Rs Implementations

- **Government Green Procurement**

- Lists of green products and services (19 products and 4 services)

- Guideline and criteria for green procurement





Priority for 3Rs Implementations

Target Waste	Priority/Activity	International Cooperation
<ul style="list-style-type: none">■ Industrial and municipal generated wastes	<ul style="list-style-type: none">- Promote main stream 3Rs into national environmental and economy policies by developing national 3Rs strategy with various instruments to create "<i>Recycle-Oriented Society</i>"	<ul style="list-style-type: none">- Transfer 3Rs best practices and support for 3Rs-related promotional activity with pilot projects
<ul style="list-style-type: none">■ E-wastes	<ul style="list-style-type: none">- Promote full scale of e-waste recycling business by conducting investment feasibility study- Promote green production to reduce e-waste generation and to promote uses of recycled material	<ul style="list-style-type: none">- Technical transfer/capacity building- Demonstration projects and business joint venture



Priority for 3Rs Implementations

Target Waste	Priority/Activity	International Cooperation
■ Industrial wastes	<ul style="list-style-type: none">- Development and transfer of environmental sound management and 3Rs technologies for resource and energy efficiency- Development of eco-industrial zone	<ul style="list-style-type: none">- Capacity building/ technical transfer- Pilot project on selected industries
■ Municipal solid wastes (MSW)	<ul style="list-style-type: none">- Promotion for integrated waste management and 3Rs- Promotion for Refuse-derived fuel (RDF) from MSW management practice	<ul style="list-style-type: none">- Support for waste-to-energy based activities- Research development and dissemination of best practices on semi-aerobic landfill and other RDF-based technologies



Priority for 3Rs Implementations

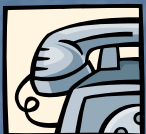
Target Waste	Priority/Activity	International Cooperation
■ Household Hazardous wastes (HHW)	- Capacity building for local authority to increase capacity of system management of HHW	- Knowledge transfer and capacity building on HHW management and best practices
■ Medical wastes	- Human resource development to overcome clustering management of medical wastes	- Cost-effective technology transfer for provincial or regional medical waste management center



For More Information



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