



# Regional Workshop of the GMS to share the lessons learnt from the Viet Nam experience on the National Strategy of Integrated Solid Waste Management/3R

28-29 July 2010

Do Son, Hai Phong,  
Viet Nam



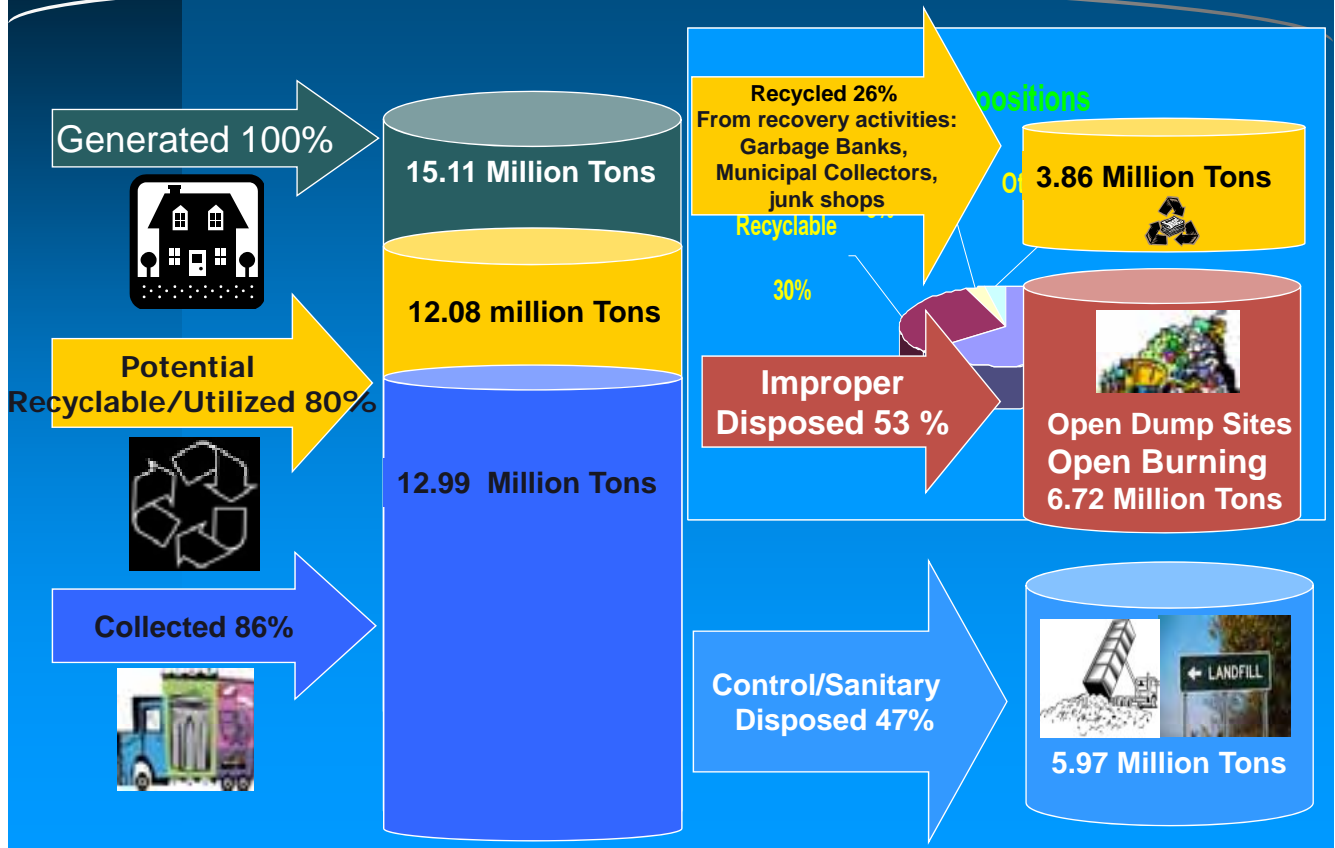
## Thailand's 3Rs Strategy



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Pollution Control Department  
Thailand

# Municipal Solid Waste Management (As of 2009): Generation, Collection, Recovery, and Disposal

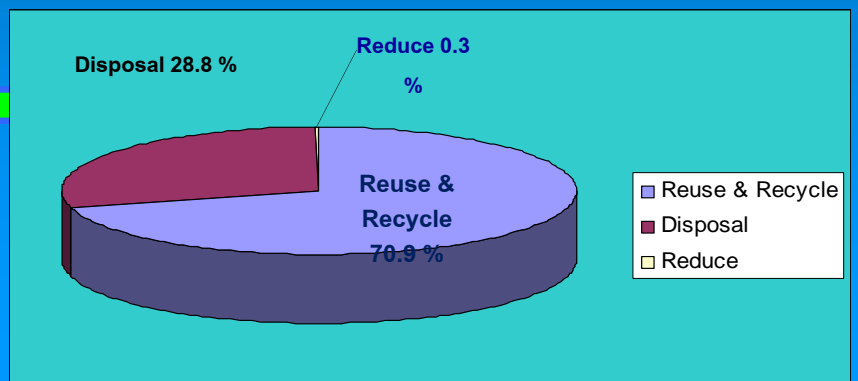
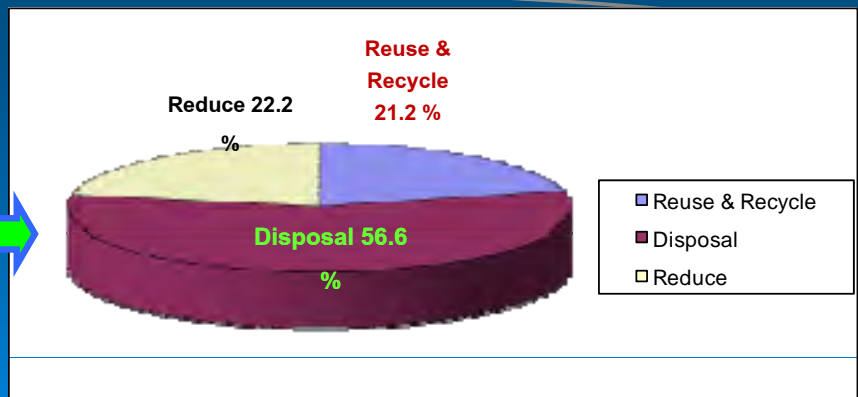


# Industrial Waste Management

Industrial Waste 10.244 MT

Hazardous Waste 1.559 MT (18.05 %)

Non-hazardous Waste 8.685 MT (81.95 %)





# Waste Management Policy

## Internal Factors

- Socio-economic development
- Government policy
- Resource and energy conservation
- Pollution status

## External Factors

- International agreements
- Trade and environment
- International standards
- Global environmental problems

National Policy on Waste Management

3Rs  
Promotions

Integrated  
Technology

Clustering  
Management

Public  
Private Partnership

Waste-to-Energy

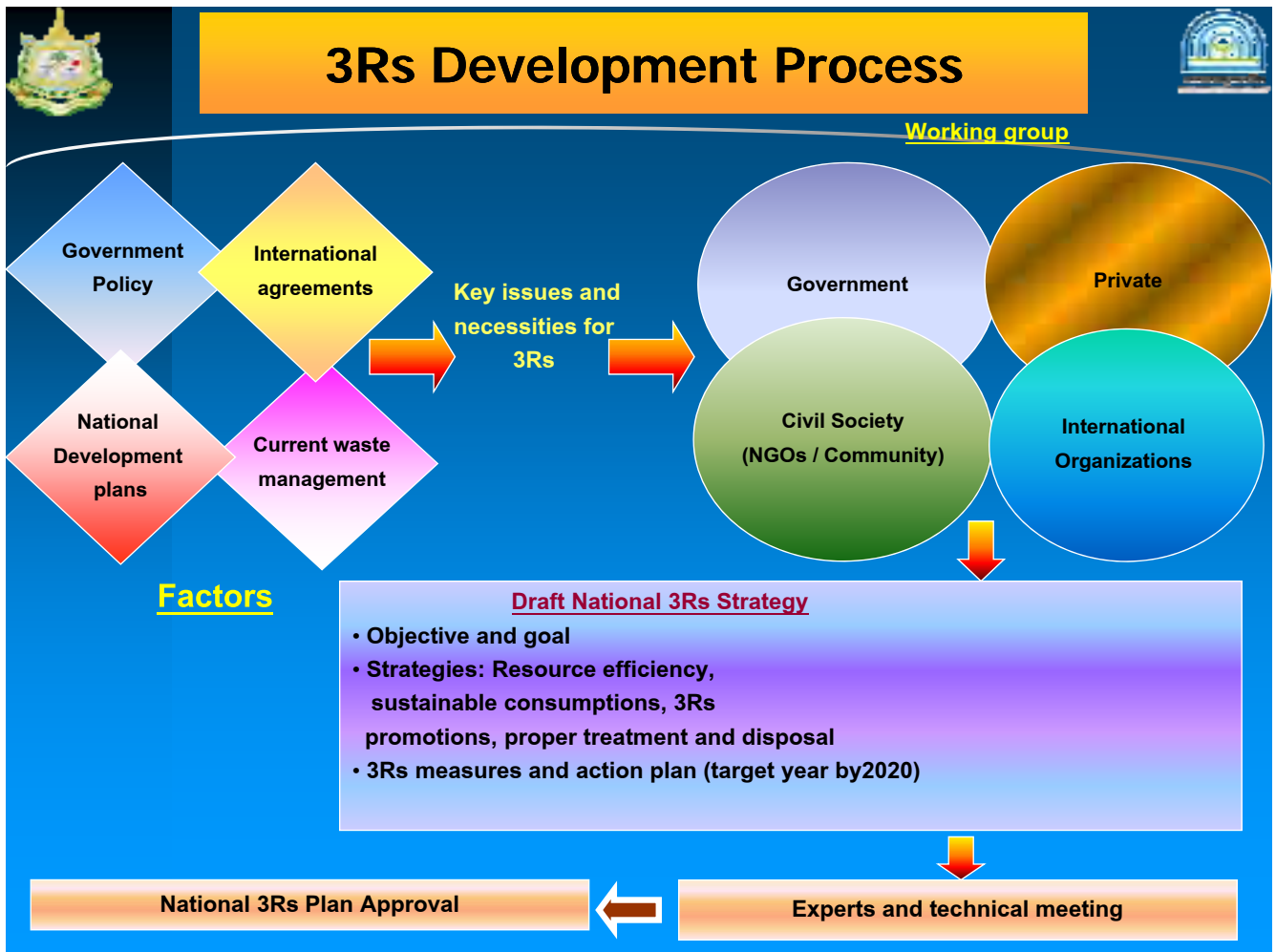


# National 3Rs Strategy

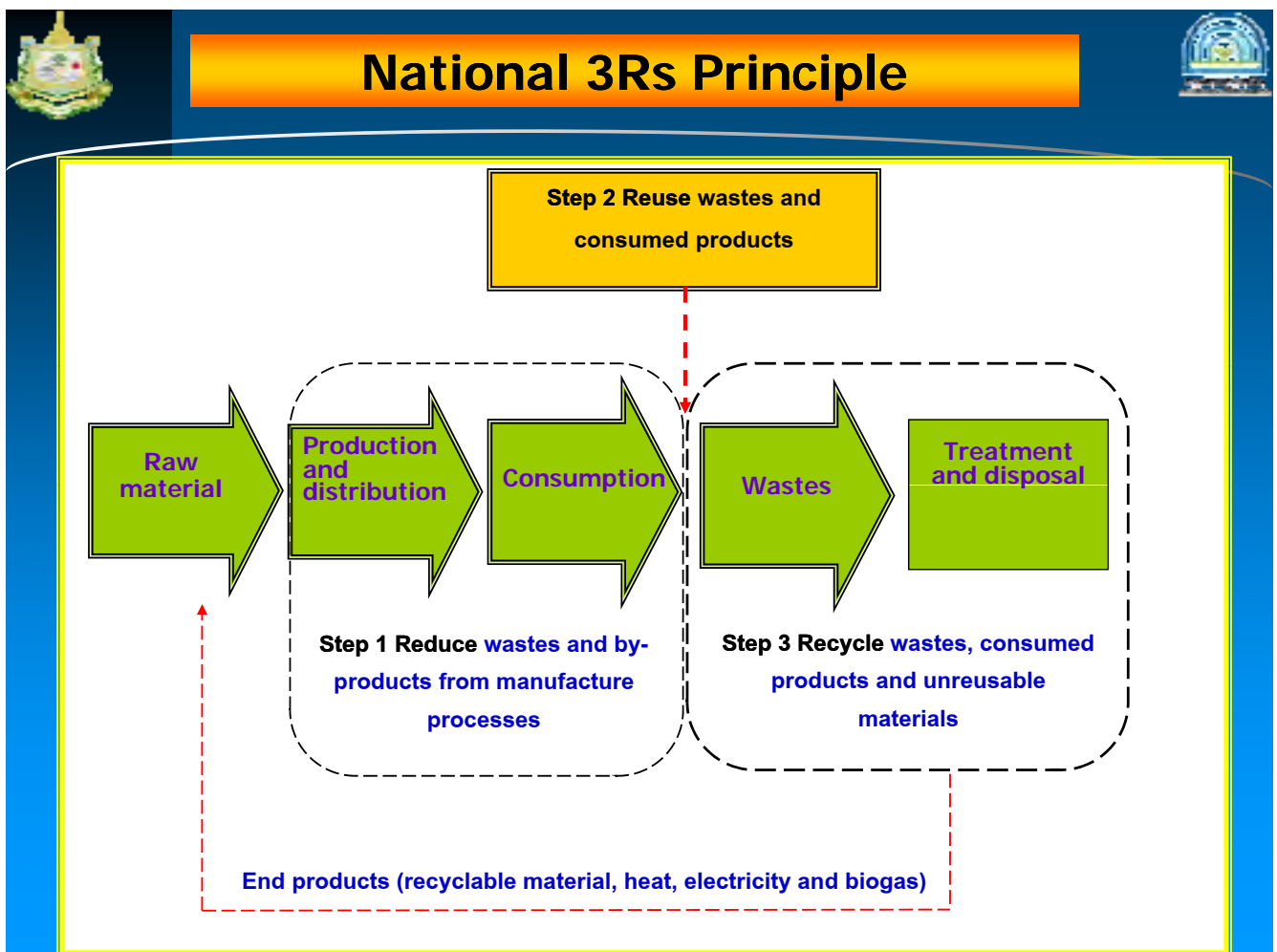
## • National 3Rs Strategy Development

- 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 strategy: Apply various principles and measures of waste management to all processes of waste generation such as production, distribution, consumption, waste recycling, treatment and disposal.

# 3Rs Development Process



# National 3Rs Principle



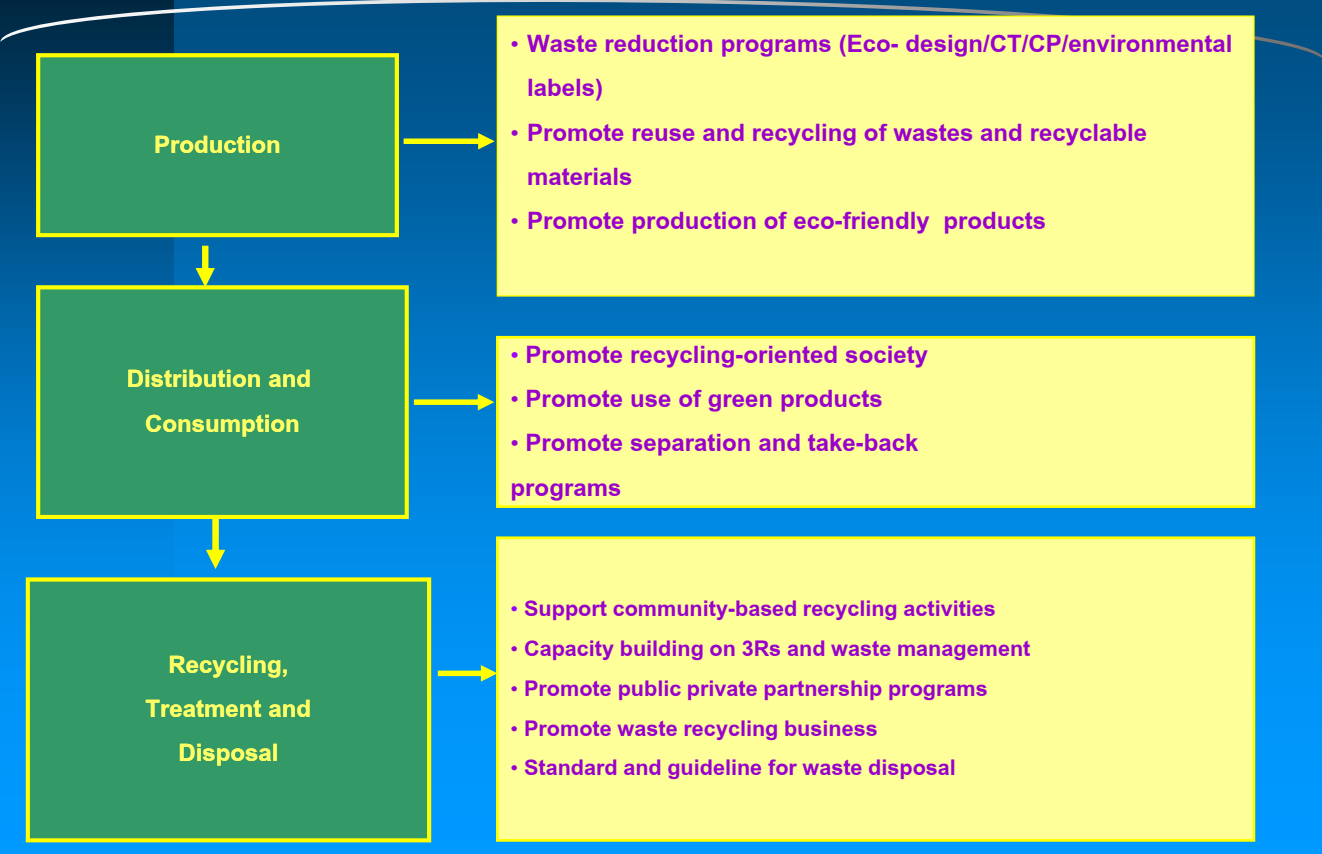


# National 3Rs Strategies

- **Resource efficiency:** Control of waste generation, promote use of reusable and recyclable parts or wastes in production and distribution processes.
- **Sustainable consumption:** Awareness rising promotion for green products, and public participation to reduce wastes at sources
- **3Rs Promotions:** Promote recycling business, household waste separation, waste to energy applications and community recycling programs
- **Proper disposal:** Develop best practices and best available technologies for management of waste residues

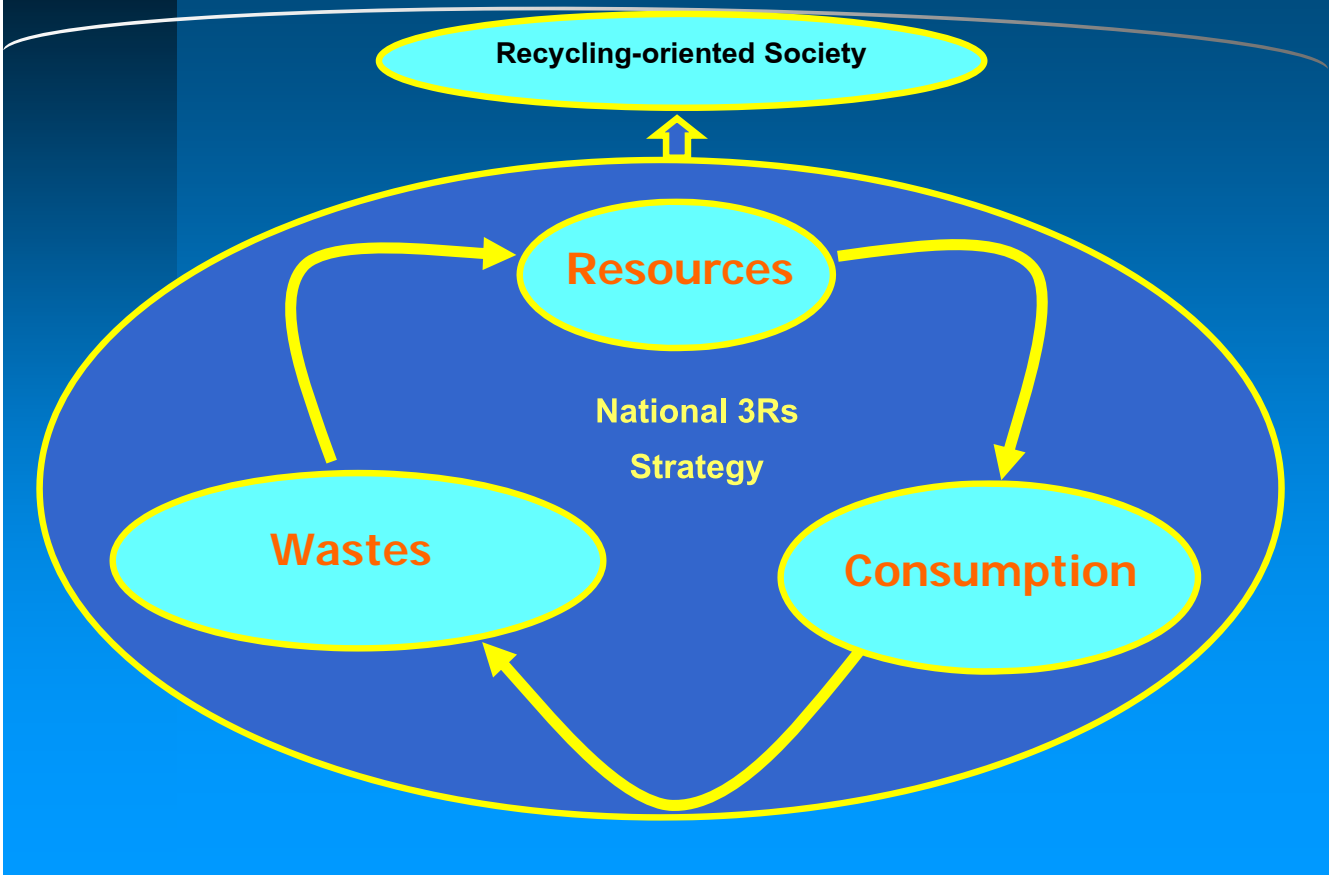


# National 3Rs Programs





## 3Rs Ultimate Goal



## 3Rs Implementations

### Short term (1-3 years)

- Policy statement and announcement
- Awareness rising
- R&D on 3Rs (CT/CP/Eco-design, recycling)
- Promotion for recycling business (BOI, SME Bank, Environmental Fund)
- Capacity building
- International cooperation



## **3Rs Implementations**



### **Medium term (3-5 years)**

- ❖ Introduce integrated waste management system in major cities
- ❖ Issue technical criteria and guideline
- ❖ Implement pollution prevention (CT/CP/Eco-design)
- ❖ Conduct green products procurement
- ❖ Initiate public private partnership programs



## **3Rs Implementations**



### **Long term (5-10 years)**

- Introduce economic instruments (Tax incentives, funding, subsidy, market mechanism, emission fees, pollution charge)
- Laws and regulations (EPR model, trade-related environment, specific control on flow of materials, resource efficiency and pollution control)



# Progress in 3Rs Implementation



## • Government Green Procurement

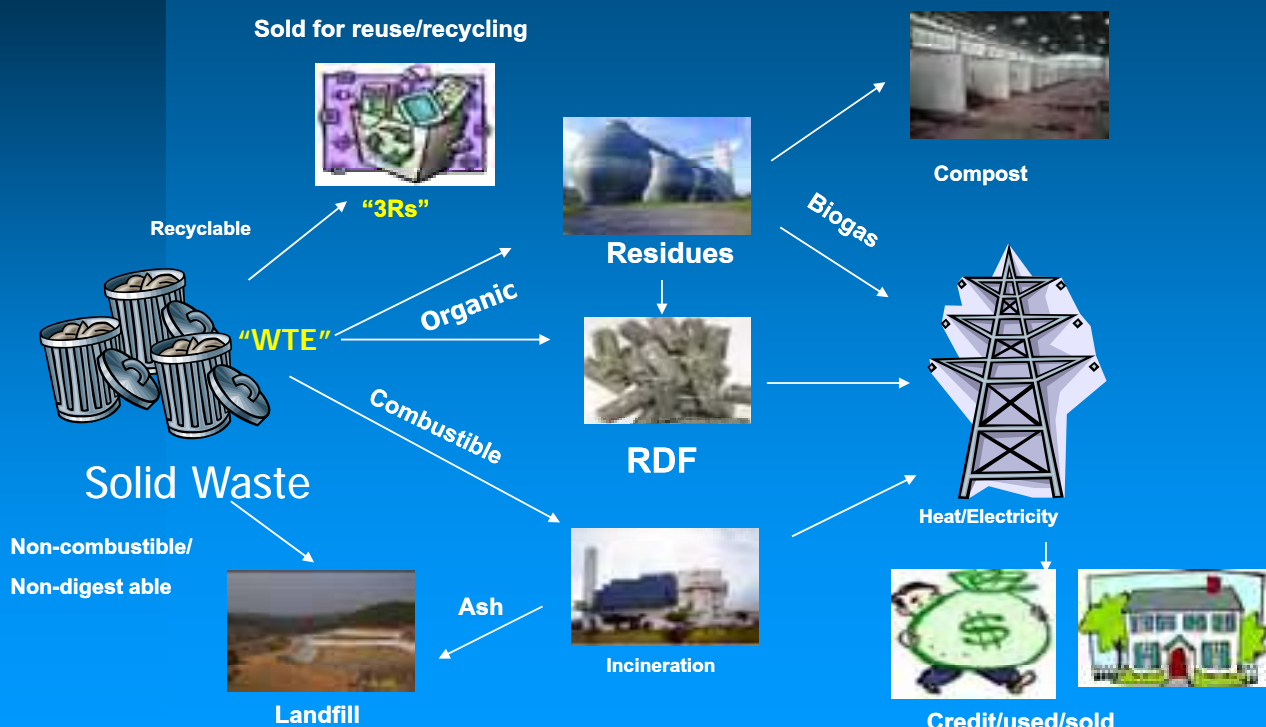
- Lists of green products and services (19 products and 4 services)
- Guideline and criteria for green procurement
- Capacity building for stakeholders
- Road map for promotion of green procurement



# Progress in 3Rs Implementation



## • Integrated Waste Management: 3Rs and WTE





# Existing Waste-to-Energy Facilities



Operating facilities with total installed-capacity of **5.075 MW**



**Phuket incinerator**  
(2.5 MW )



**Biogas from landfill at Rachadeva** (950 kW)



**Biogas at Rayong municipality** (625 kW)



**Biogas from landfill at Khampeangsan** (1 MW)



# Progress in 3Rs Implementation



## 3Rs in Industrial sector

- CT/CP applications
- Green purchasing network
- Industrial waste exchange program
- Ministry notification on sorting, storage and residues management





# Progress in 3Rs Implementation

## • Take-back Program for End-of-life Products

➤ Packaging and packaging waste



➤ Mobile phone and batteries



➤ Fluorescent lamp



➤ Used lead-acid batteries and dry cell batteries



# Progress in 3Rs Implementation

## • Capacity Building on 3Rs

- Regional Conference



- Guidelines/manuals



- Waste - specific containers



## Progress in 3Rs Implementation



- **Promotion for recycling-oriented society**
  - Over 200 communities implement the 3Rs activities , some municipalities reduce waste up to 30-50%



## Progress in 3Rs Implementation



- **Strengthen informal sectors on waste business: Green junkshop projects**





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