



Division of Technology, Industry and Economics

Eco-town project based on 3R

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Overview of the Presentation

- Defining Industrial eco-town
- Integrated solid waste management (ISWM) based on 3R
- IETC Activities on ISWM and eco towns
- IETC eco-town project – Phase 2 (2013 to 2016)

Defining Industrial Eco-town

Industrial eco-town is based on the concept of venous industry that is traditionally referred as that industry which turns solid wastes into reusable resources and then uses them in production; it includes two stages: from solid wastes to raw materials, and from raw materials to products. The character of venous industry¡ is to shape the industrial chain based on waste – recycled resource - product.

However, we can improve this definition by including all wastes and turning waste into raw materials as well as energy source for industrial production

Eco Town Concept

Waste Generation
Industrial
Municipal
Agricultural
Debris
Wastewater / sludge
Others

Waste Recycling Strategies
(Awareness and education, policies, technologies, financing and voluntary)

Waste Recycling
(Material/Energy)
Industrial
Commercial
Agricultural
Residential
Others

Waste Minimization and Reuse Strategies
(Awareness and education, policies, technologies, financing and voluntary)

Integrated Solid Waste Management Challenges for Waste Management

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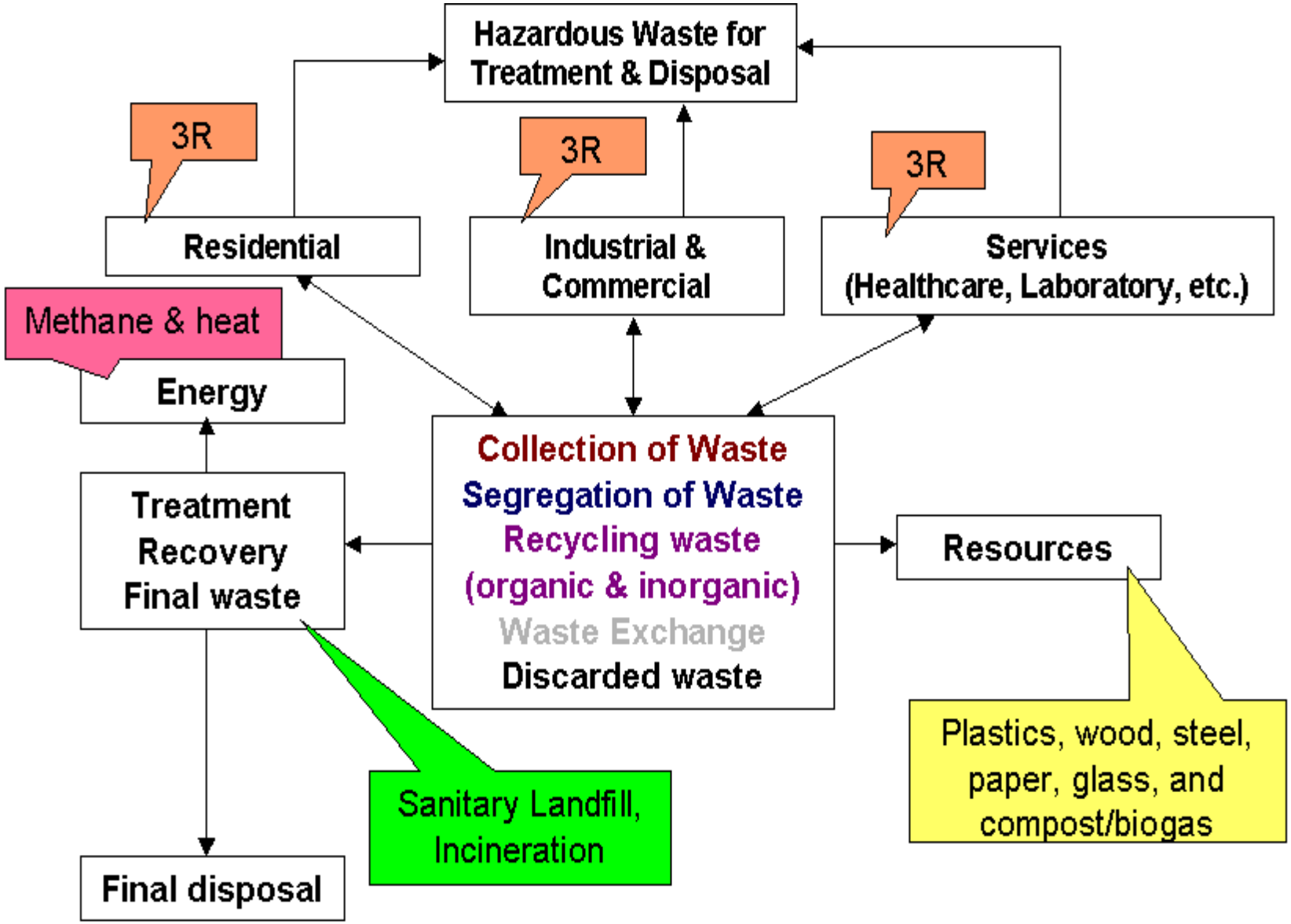
1. Waste generation – rapid growth in quantity and changing composition in line with change in life styles
2. Severity of impacts – impacts on public health, natural resources including water bodies and disasters (landslides and fires at dumpsites)
3. Increasing costs of waste management and lack of financing mechanisms
4. Limited infrastructure and policy framework for efficient and effective waste management system
5. Lack of political priority
6. GHG gas emissions and co-benefits for climate change and global warming (waste to energy, landfill gas recovery and utilization and diverting waste for resource recovery)

Integrated Solid Waste Management Based on 3R Approach



Pilot Projects on ISWM

- Wuxi New District, China – 2008
- Pune City, India – 2008
- Maseru City, Lesotho – 2009
- Matale City, Sri Lanka – 2009
- Novo Hamburgo, Brazil – 2009
- Nairobi – 2010
- Bahir Dar, Ethiopia – 2010
- Pathum Thani, Thailand – 2011
- Addis Ababa – 2011
- Danang, Vietnam - 2012

Kampot, Cambodia - 2012

Flood waste in Thailand - 2012

Training

- Classroom as well as field training and training is followed by the project activities for each ISWM manual (e.g. waste data, assessment of waste management system, target setting, identification of stakeholders concerns) and to develop ISWM Plan

- Regional training with various partners including UNITAR-Cifal Jeju, UN-ESCAP, and UNEP ROAP

- IETC provides training through in-house capacity, targeted either directly to project teams or through training for trainers








CCAC MSW Initiative

Climate and Clean Air Coalition (CCAC) for Short-lived Climate Pollutants (SLCPs)

Municipal Solid Waste (MSW) Initiative

Current cities from Asia:
Dhaka (Bangladesh), Ho Chi Minh City (Vietnam)
Penang (Malaysia), and Tokyo (Japan

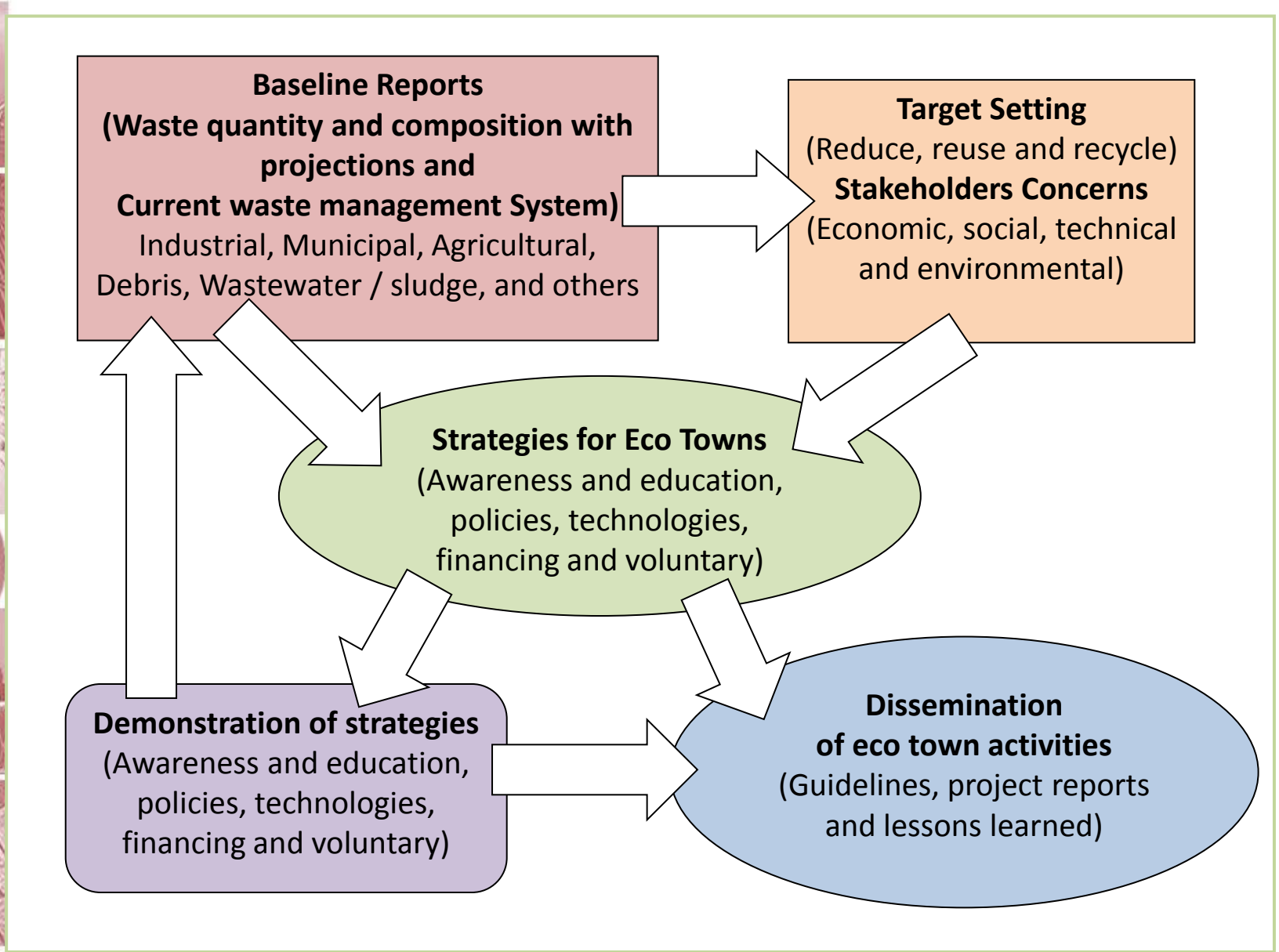
Current Activities:
Rapid assessment (city assessments)
Task force
Knowledge platform
Twining of cities

ISWM and Eco Towns

Eco town concept is one of the strategies to implement ISWM in cities with industrial clusters. To minimize the waste and to reuse and recycle the waste optimally, following steps are essential:

- Waste inventory, composition and sources including location
- Review of current waste management system including policies, institutions, financing, technology and infrastructure, and stakeholders roles
- Target setting based on the above information (waste data and current waste management system)
- Stakeholders concerns (environmental, financial, social and technical) for meeting the targets are taken into account
- Strategies (awareness and education, policies, technologies, financing and voluntary) based on the above four sets of information to revitalize industrial clusters in line with eco town concept

Eco Town Project Cycle



Main Considerations for Eco Towns

1. Costs and benefits of technologies and affordability of users (current and future with new financing mechanisms including user fees, clean development mechanism (CDM) projects, or earnings by converting waste into a resource)
2. Technical capacity to adapt, operate and maintain technologies (roadmap to develop technical capacity)
3. Policy support for technological solutions
4. Social perspectives including employment and income distribution (for example informal sector), gender, and awareness and continuous learning

Main Activities to Promote Eco Towns

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Phase 1 (2009 to 2012)cities

Penang – Malaysia, Bandung – Indonesia, and Shanyang – China

To follow up on the activities conducted during previous Phase (2009-2011) and to finalize the activities and reports. One of two cities will be selected to showcase the efforts of Eco-Town based on previous phase experiences. This case study will be useful for new cities to undertake the eco town project.

Phase 2 (2013 to 2016)

1. Strategy Paper

The aim of eco-town strategy paper is to build the local and national capacity on detailed planning and implementation of eco-town strategies and policies in line with the IETC programme on ISWM based on 3R. This strategy paper on strategies and policies for eco-towns will also include the details of the projects for the potential eco-towns to develop an implementation strategy, including fund-raising. Following activities will be carried out to undertake this work:

Pilot activities

During the second phase of eco-towns, IETC will expand its geographical coverage to include more cities/municipalities to support pilot activities on eco-towns. For the pilot cities/countries, capacity will be build on following areas, leading to development of eco-town projects for the respective cities:

1. Waste inventory, composition and sources including location
2. Current waste management system including policies, institutions, financing, technology and infrastructure, and stakeholders roles
3. Target setting based on the above information (waste data and current waste management system)
4. Stakeholders concerns (environmental, financial, social and technical) for meeting the targets
5. Strategies (awareness and education, policies, technologies, financing and voluntary) based on the above four sets of information to revitalize industrial clusters in line with eco town concept
6. Technical support for implementation of the strategies on pilot basis in selected cities/municipalities

Budget and timeline

Activities	Timeframe			
	2013	2014	2015	2016
• Strategy and policy paper	XXX			
• Pilot projects in five countries	XXX	XXXXXXX	XXXXXXX	
• Document lessons learned			XXXX	
• Dissemination workshops			XXXX	
Guidance manual and training materials				XXX
Regional training and awareness-raising workshops				XXXXXXX

Ballpark budget:

Strategy and policy paper including expert and stakeholder workshops = 100,000 USD

Five pilot country projects = 5X200000 = 1,000,000 USD

Documentation of lessons learned and dissemination workshops = 10X10000 = 100,000 USD

Guidance manual and regional training workshops = 5X40,000 = 200,000 USD

Grand Total = USD 1,400,000

Thank You…