

Promotion of the 3Rs in Asia

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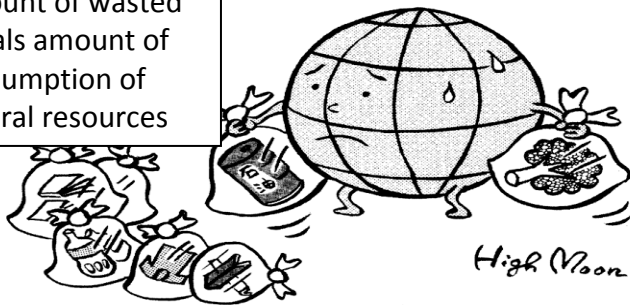
Changing Society

(20th Century)

Mass consumption society

- ◆ Mass production, Mass consumption, Mass disposal
- ◆ Parallel Growth of economic development and wastes disposal

Amount of wasted equals amount of consumption of natural resources

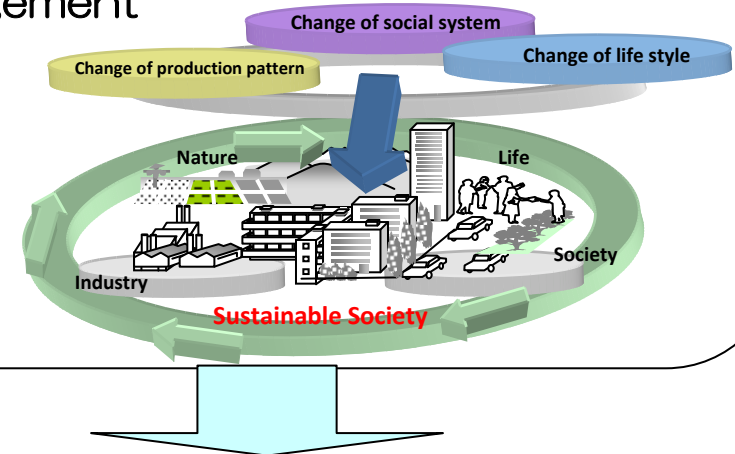


- Increase of environmental pressure
- Growing consumption of natural resources

(21st Century)

Sound Material-cycle society

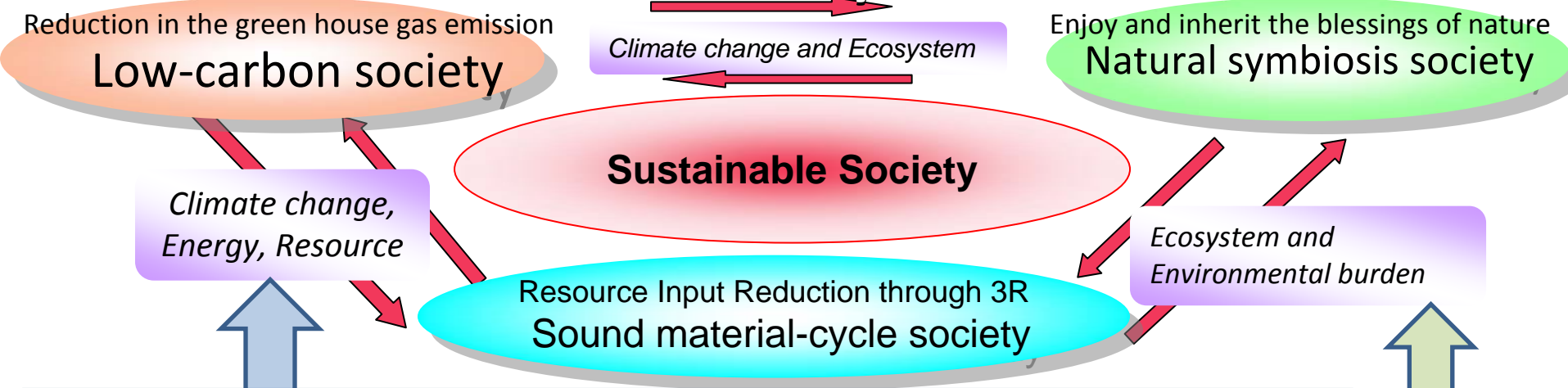
- ◆ Integration of environment, economy and society
- ◆ De-coupling economic development and wastes generation
- ◆ Promotion of 3R and sound waste management



- Reduction of environmental pressure
- Reduction of consumption of natural resources
- Green Growth/ Green New Deal

Integrated approach for establishing Sustainable

Society



○ Integrated approach to the sound material-cycle society and low-carbon society

- ✓ Improvement of land fill site with the collection of methane
- ✓ Separate collection and composting of organic wastes
- ✓ Strengthen the thermal recovery by waste power generation etc.
- ✓ Reduction of input of natural resources by promotion of 3R

○ Integrated approach to the sound material-cycle society and natural symbiosis society

- ✓ Restrain the new natural resource extraction, by promoting the prolonged utilization of housing and infrastructure.
- ✓ Promote the sustainable use of recyclable resource, considering the conservation of biodiversity.

Challenge 25

The Prime Minister Hatoyama announced 25% reduction target of GHG emissions by 2020 from 1990 level. Japan implements every action, called “Challenge 25”.

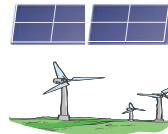
Energy

- Improve efficiency of thermal power plant
- Nuclear power plant



【Renewable energy】

- photovoltaic generation, wind generation
- Biomass
- Waste power generation



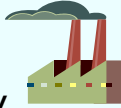
Transportation

- EV, Hybrid car
- Improve efficiency economy
- Improve efficiency of train, ship, airplane
- Introduction of bio ethanol



Industry

- Low carbon production of steel
- Energy efficient management at factory



Office, home

- Super-insulated house
- Photovoltaic, solar heating
- High efficiency heat pump
- Energy saving home appliance
- Energy management system (HEMS/BEMS)



City and Rural

【City, Urban transportation】

- Shorten the daily travel distance
- Public transportation

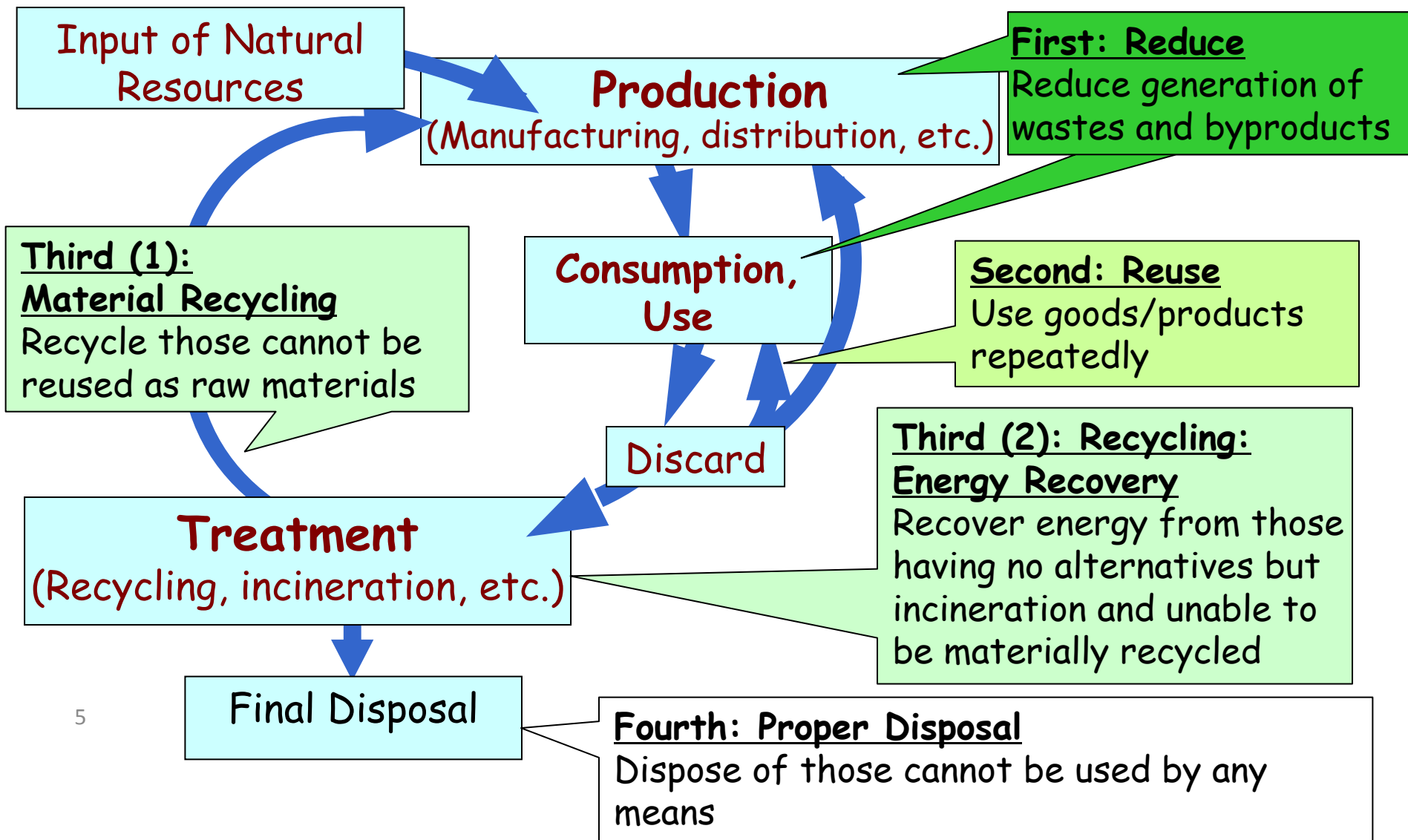
【Forest, Agriculture】

- Promotion of use of woods, local production for local consumption
- Increase carbon sink

Assistance to developing world

- Support for Developing countries “Hatoyama Initiative”

Concept of a Sound Material-Cycle Society in Japan



1. Policies towards establishing a Sound Material-Cycle Society in Japan

Legislative Framework to Establish a Sound Material-Cycle Society

Fundamental Environmental Law

1994. 8

Fundamental Law for Establishing a Sound Material-Cycle Society
(Fundamental Plan for Establishing a Sound Material Cycle Society)

2001. 1

2003, 2008

(Establishment of General Systems)

Waste Management and
Public Cleansing Law

Law for Promotion of Effective
Utilization of Resources

(Regulations according to the Characteristics of Respective Items)

Container and
Packaging
Recycling Law

2000. 4

Glass containers,
PET bottles, Paper
and plastic
containers and
wrapping and
others

Home
Appliances
Recycling Law

2001. 4

Air conditioner,
refrigerator and freezer,
CRT-TV, and washing
machine

※LCD-TV, Plasma display TV, and
Machine Clothes Dryer are now
under consideration to be added.

Construction
Materials
Recycling Law

2002. 5

Waste wood,
concrete, asphalt

Food
Wastes
Recycling
Law

2001. 5

[Food waste]

※Partially revised in
2007 to introduce the
concept of recycle loop.

End-of-life
Vehicles
Recycling Law

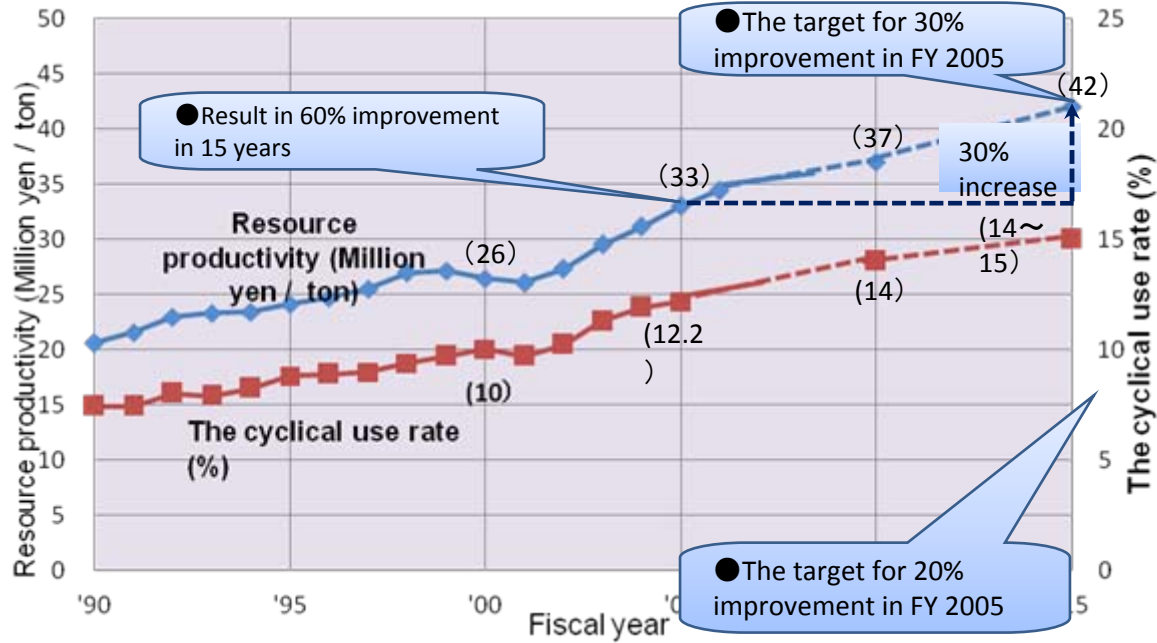
2005. 1

[Automobiles]

Law on Promoting Green Purchasing

Material flow indicators: Indices to set a target

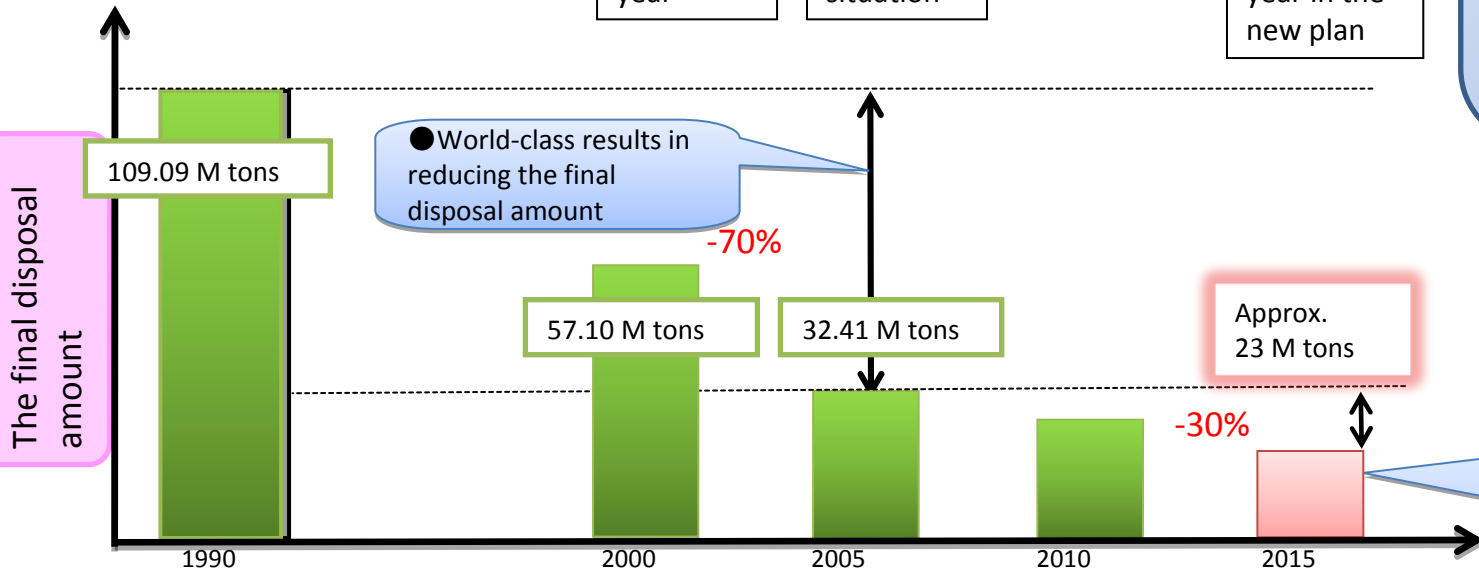
Resource productivity & The cyclical use rate



The 2nd Plan

- In FY 2000 → In FY 2015
- Resource productivity 26 million yen per ton → 42 million yen per ton (about 60% improvement)
 - The cyclical use rate 10% → 14~15% (about 40~50% improvement)
 - The Final disposal 5.700 million ton → 2.300 million ton (60% reduction)

The base year Current situation The target year in the new plan



Market scale of 3R business in Japan

	Business examples	Market (trillion yen)		Employment (thousand people)	
		2000	2006	2000	2006
Supply of machinery, equipment and plants	<ul style="list-style-type: none"> • Intermediate treatment plants • Melting equipment • Oil manufacturing facilities from plastics • Composting equipment • Construction of final disposal sites 	0.8	0.5	2	7
Supply of services	<ul style="list-style-type: none"> • Waste treatment • Resource recovery • Recycling 	28	32	195	140
Supply of materials, consumer goods	<ul style="list-style-type: none"> • Reclaimed oil from plastics • PET-recycled fiber • Products made of timber from forest-thinning • Recycled products (e.g. scrap metals, recycled paper) • Refillable products • Repairs of machinery, furniture 	170	260	332	486
Total of 3R business		205	297	529	633
Total of all eco-business		41	69	1,060	1,300

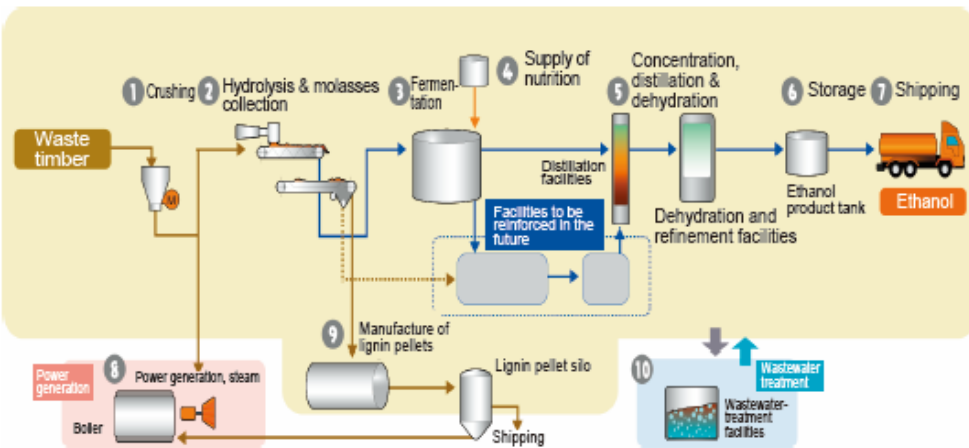
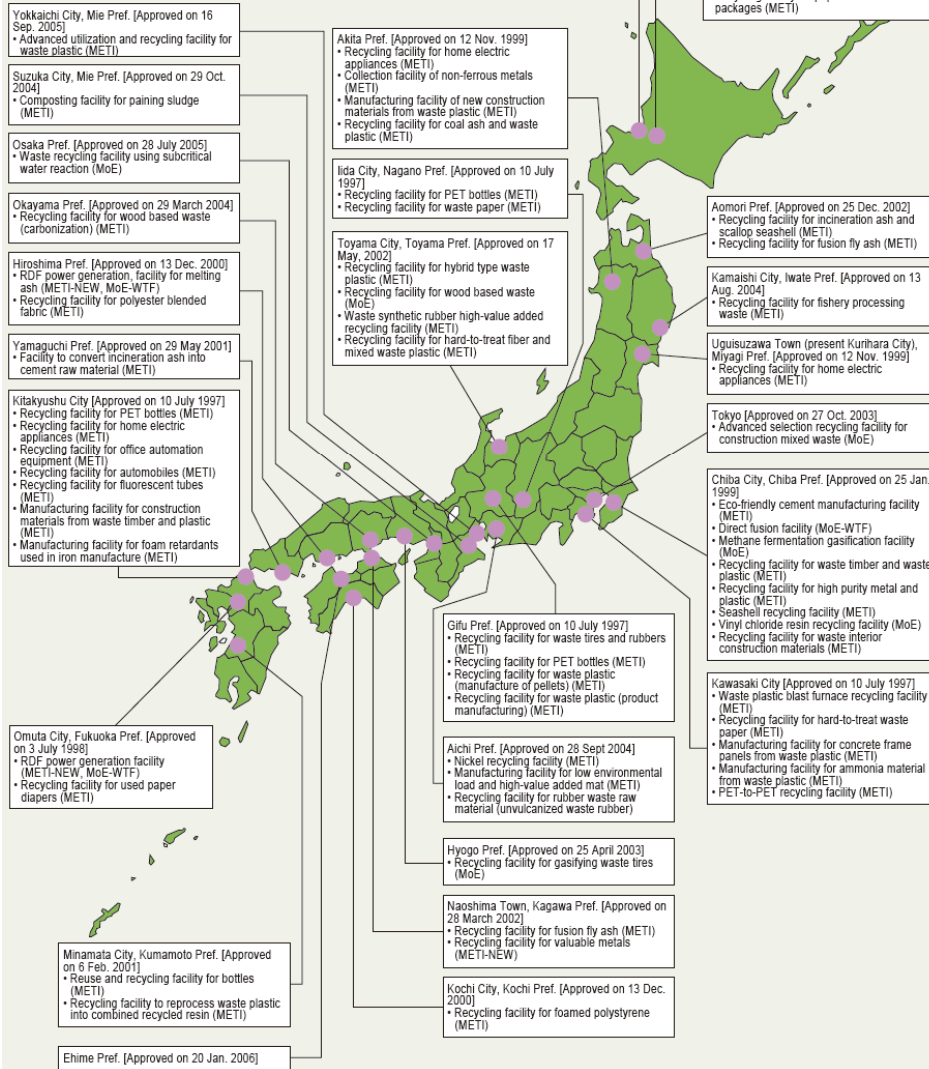
Eco Town

Eco Town:

- an eco-investment program in major industrial estates in which recycling business are operated for implementation of sectoral recycling laws and regulations.
- Central government provides subsidies to private sectors for construction of recycling plants.

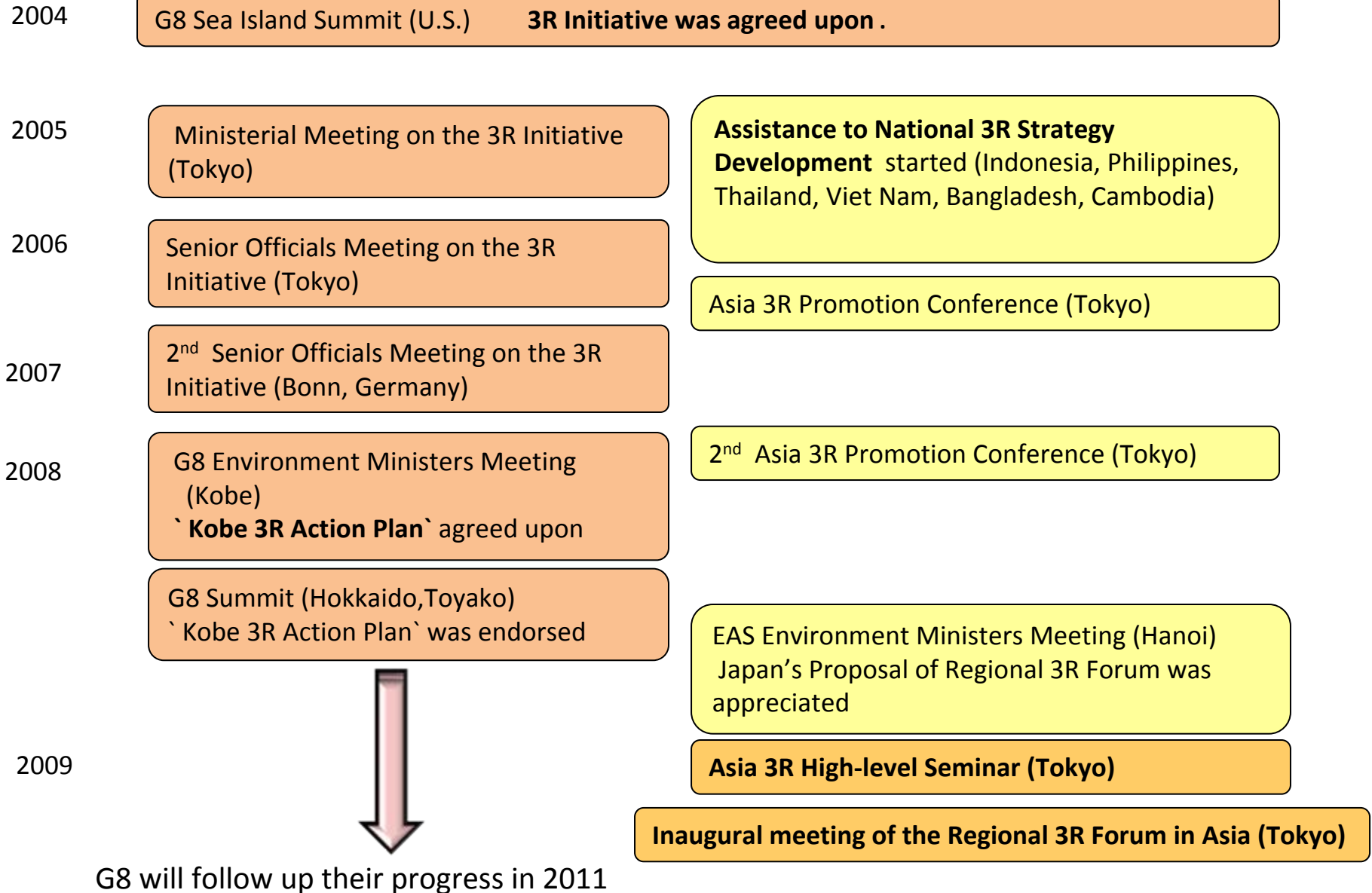
*METI: Subsidy to Eco Town by the Ministry of Energy, Trade and Industry (METI)
 METI-NEW: Subsidy to New Energy by the METI
 MoE: Subsidy to Eco Town by the Ministry of the Environment (MoE)
 MoE-WTF: Subsidy to Waste Treatment Facilities Development by the MoE
 Source: Ministry of the Environment, Ministry of Energy, Trade and Industry

26 areas as of December 2008

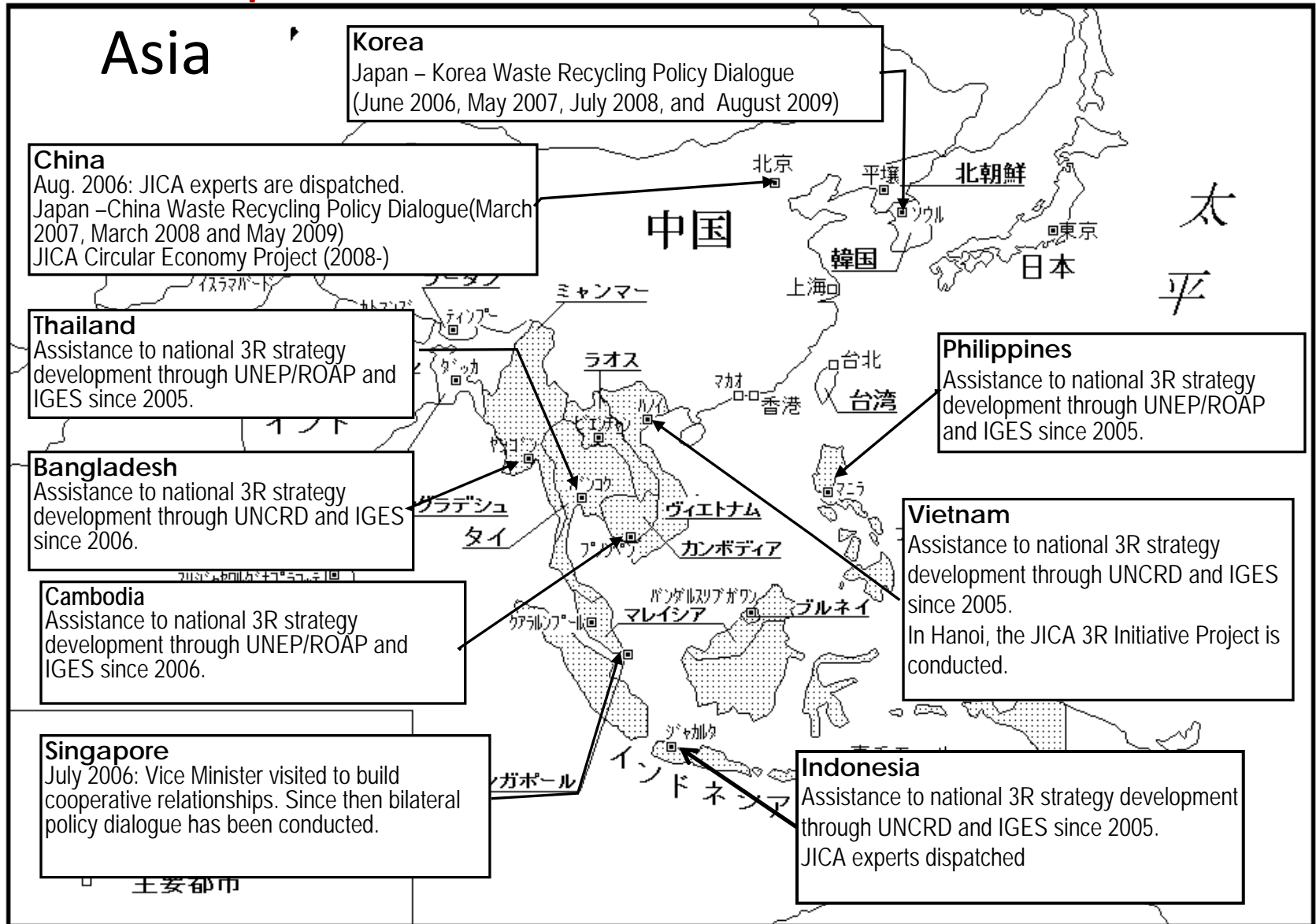


**2. Promotion of 3Rs in Asia
and
Establishment of
'Regional 3R Forum in Asia'**

Japan's Initiative for 3Rs



Japan's Bilateral Activities for 3Rs



• Technical assistance for sound waste management are being provided for some Pacific Islands states. Also in Mexico JICA supports the development of national 3R program since 2007.

Promotion of the 3Rs in Asia

Establish a Sound Material Cycle Society in Asian region as a Win-Win solution

Policy Dialogues in Asia

Asia 3R Conference

Supporting national 3R strategies development in Asian countries

Collaborate with UNCRD and UNEP in some Asian countries

Regional Forum on Environment and Health

Thematic Working Group on Solid and Hazardous Waste

Development of Information and Knowledge Hub and Research Networks

- Support establishing 3R Knowledge Hub
- Support Society of Solid Waste Management Experts in Asia-Pacific Islands

Disseminate Japan's experience

Published a report summarizing Japan's experience in waste and recycling resources

Prevention of illegal export and import

- Asian network for the prevention of illegal export and import of hazardous wastes
- Formulating international guidelines to ensure appropriate export and import

E-waste measures

- Implemented regional action plans for e-waste appropriate management in Asia and Pacific.
- Constructing appropriate used goods recycling systems in Asia.

UNEP, ESCAP, UNCRD, Basel Convention, ADB, IGES, APN

Significance of Regional 3R Forum in Asia

- Increasing Waste generation with urbanization and industrialization are a pressing common issue for all Asian countries. 3R concept disseminated.
- Recognition of co-benefits of 3R in addressing resource efficiency and energy efficiency (climate change).
- Policy dialogues, developing national strategies (Bangladesh, Cambodia, Indonesia, Philippines, Thailand, Vietnam), knowledge management efforts, etc. in progress.
- Need for prioritizing 3R and waste management policies
- Need for action-oriented efforts, materializing projects
- Need for seeking synergy among initiatives, and involving various stakeholders



Establishment of 'Regional 3R Forum in Asia', a new open platform for regional cooperation was supported at the first East Asia Summit Environment Ministers Meeting, in Hanoi, Viet Nam in October 2008.

Goal of Regional 3R Forum in Asia

- Achieve “low carbon and sound material cycle societies in Asia” through:
- Facilitating bilateral and multilateral cooperation for:
 - increasing resource and energy efficiency through the 3Rs
 - promoting environmentally sound management of wastes in the region
 - Capacity building and institutional development in the respective country