



# JCM Project Opportunities under the Bangkok Master Plan on Climate Change

December 2015

Overseas Environmental Cooperation Center , Japan (OECC)

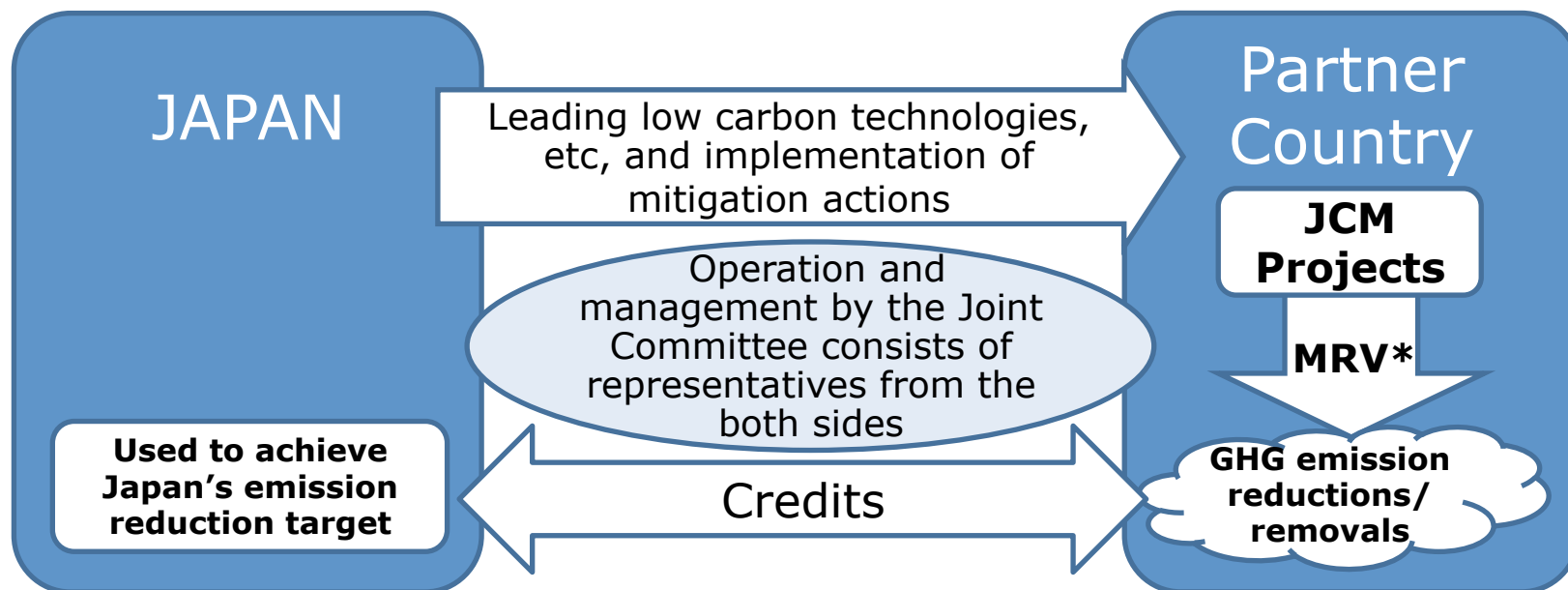
# Out line of the Presentation



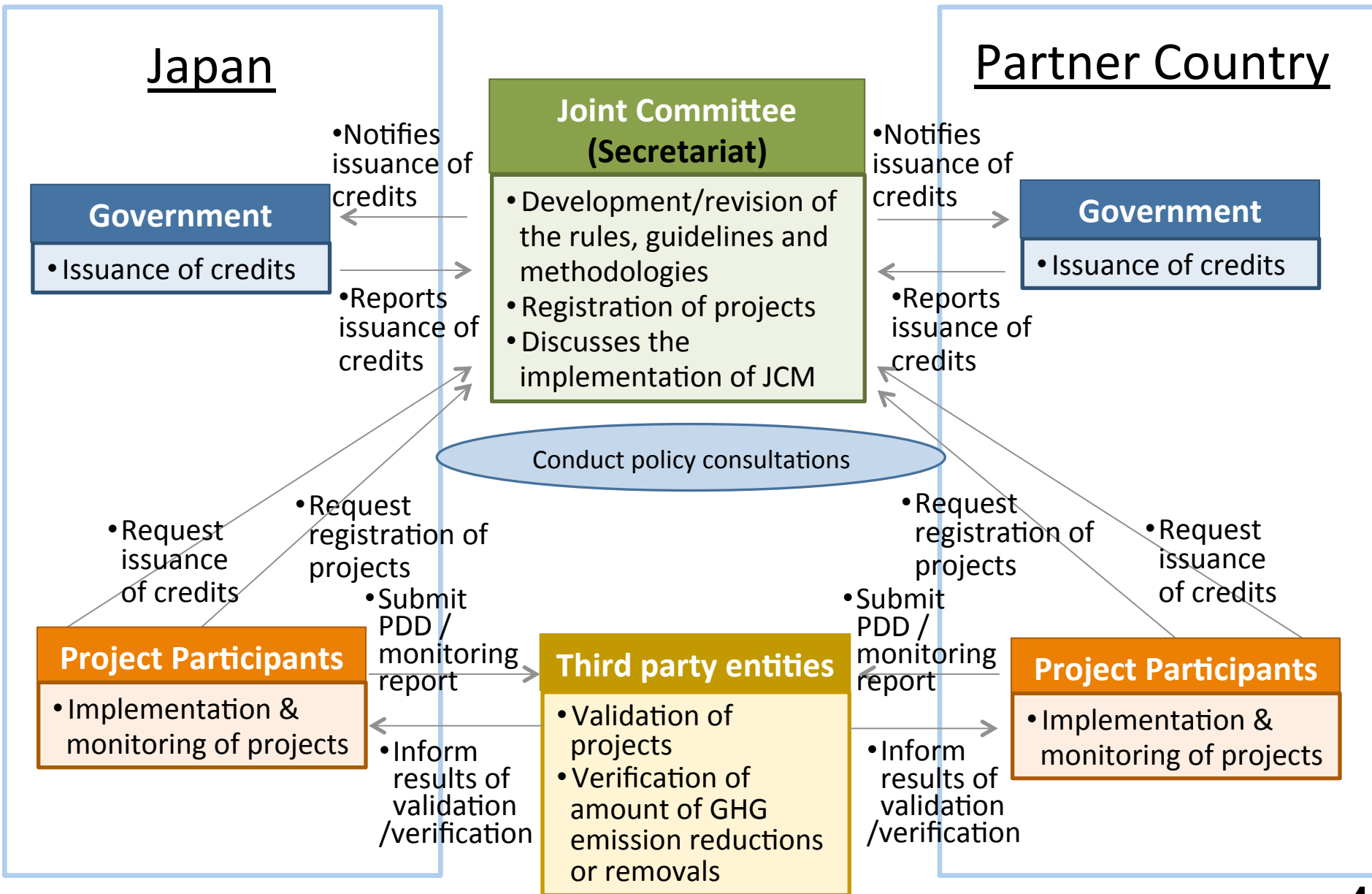
- ✓ Basic concept of the JCM and the Background
- ✓ Outline of the Feasibility Study in FY 2015
- ✓ Financing Programme for JCM Model Projects by the MOEJ
- ✓ Formulating Projects
- ✓ Japanese Entities

# Basic Concept of the JCM

- Facilitating diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of developing countries.
- Appropriately evaluating contributions from Japan to GHG emission reductions or removals in a quantitative manner and use them to achieve Japan's emission reduction target.
- Contributing to the ultimate objective of the UNFCCC by facilitating global actions for GHG emission reductions or removals.



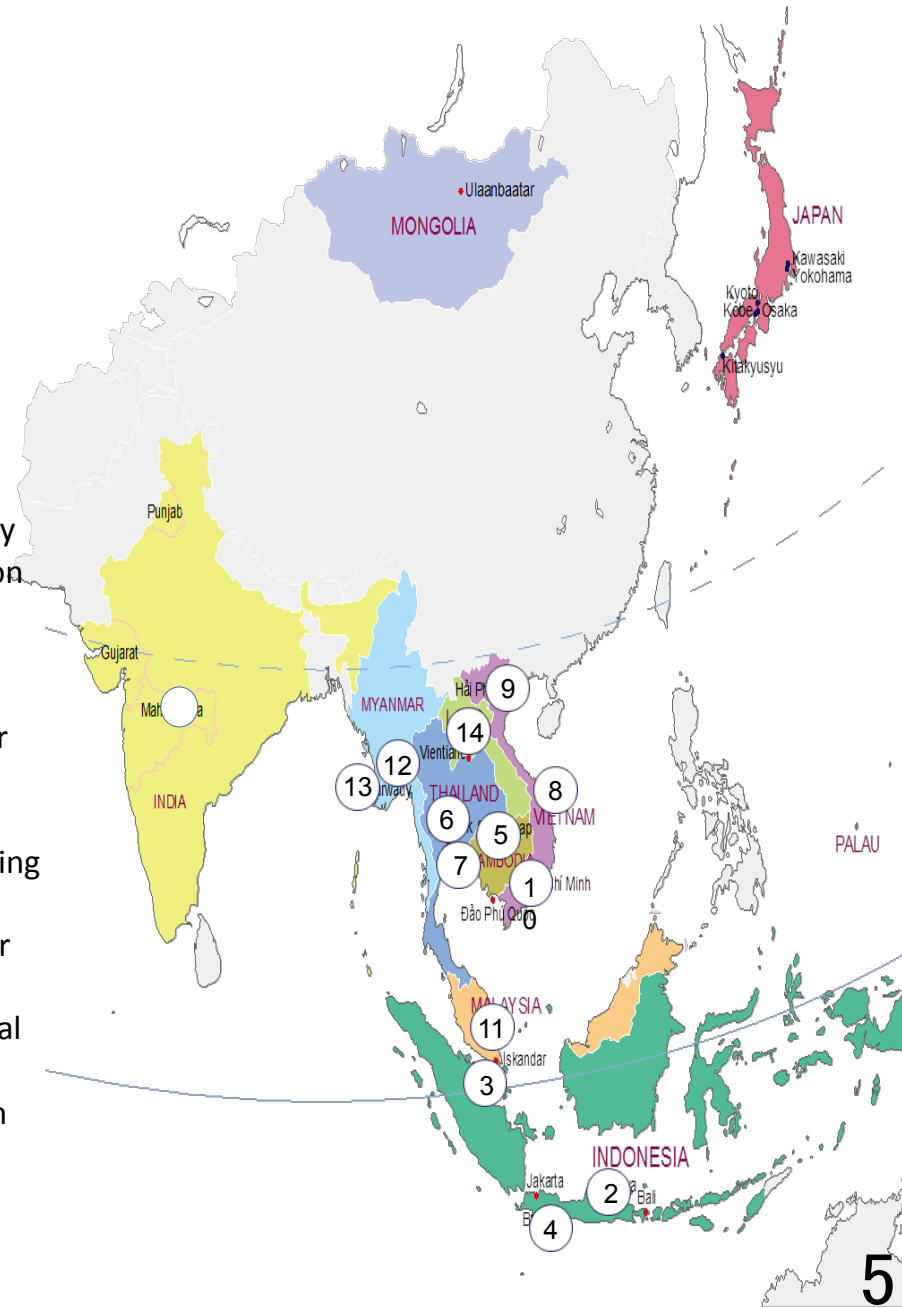
# Scheme of the JCM



# FY2015 Feasibility studies for city to city collaboration project by MOEJ

## Project List

1. Promotion of low carbon city by properly developing material recycling systems in Bengaluru City (Bengaluru City)
2. Establishment of Base for Low-Carbon Project Expansion in Surabaya (Surabaya)
3. Project for Developing JCM projects under city-to-city collaboration between Yokohama city and Batam city (Batam)
4. Project for Low Carbon Society Development under Collaboration between Bandung City and City of Kawasaki (Bandung City)
5. Project for Developing Low-carbon Tourism Cities through the Joint Crediting Mechanism in Siem Reap (Siem Reap)
6. JCM projects development (energy efficiency, and waste and waste water) under the Bangkok Master Plan on Climate Change, and study on financial and other facilitation schemes for introducing low carbon technologies (Bangkok)
7. Promotion of Decarbonizing of Municipal Waste Management and Ecological Industrial Town in Rayong Prefecture (Rayong Pref.)
8. JCM Feasibility Study in Da Nang through "Technical Cooperation for Sustainable Urban Development" with Yokohama City (Da Nang)
9. The whole city low carbonization in Hai Phong City (Hai Phong)
10. Ho Chi Minh City – Osaka City Cooperation Programme for Developing Low Carbon City (Ho Chi Minh)
11. Establishment of Base for Low-Carbon Project Expansion in Iskandar (Iskandar)
12. Study for building a sustainable low carbon city around the industrial zone in Patheingyi city, Ayeyarwady Division, Myanmar (Patheingyi)
13. JCM Project Formulation Study through City-to-City Collaboration in Yangon (Yangon)
14. Programme for the Establishment of Low-Carbon Historic City in Vientiane, based on City-to-City Cooperation between Vientiane Capital and Kyoto City (Vientiane Capital)



# Background: JICA Technical Cooperation Project for BMA Master Plan on Climate Change 2013-2023

## Objectives

- (1) Drafting a Bangkok Master Plan on Climate Change 2013-2023
- (2) Capacity development for the implementation of the Master Plan

### City of Yokohama



#### Yokohama Partnership of Resources and Technologies

- Know-how to low carbon development
- Environmental technology



#### Inter-City cooperation

Dr. Vallop Suwande, Chairman of the Advisors to the Governor of BMA (right) and Ms. Fumiko Hayashi, Mayor of Yokohama City (left), are signing the inter-city cooperation agreement

### BMA



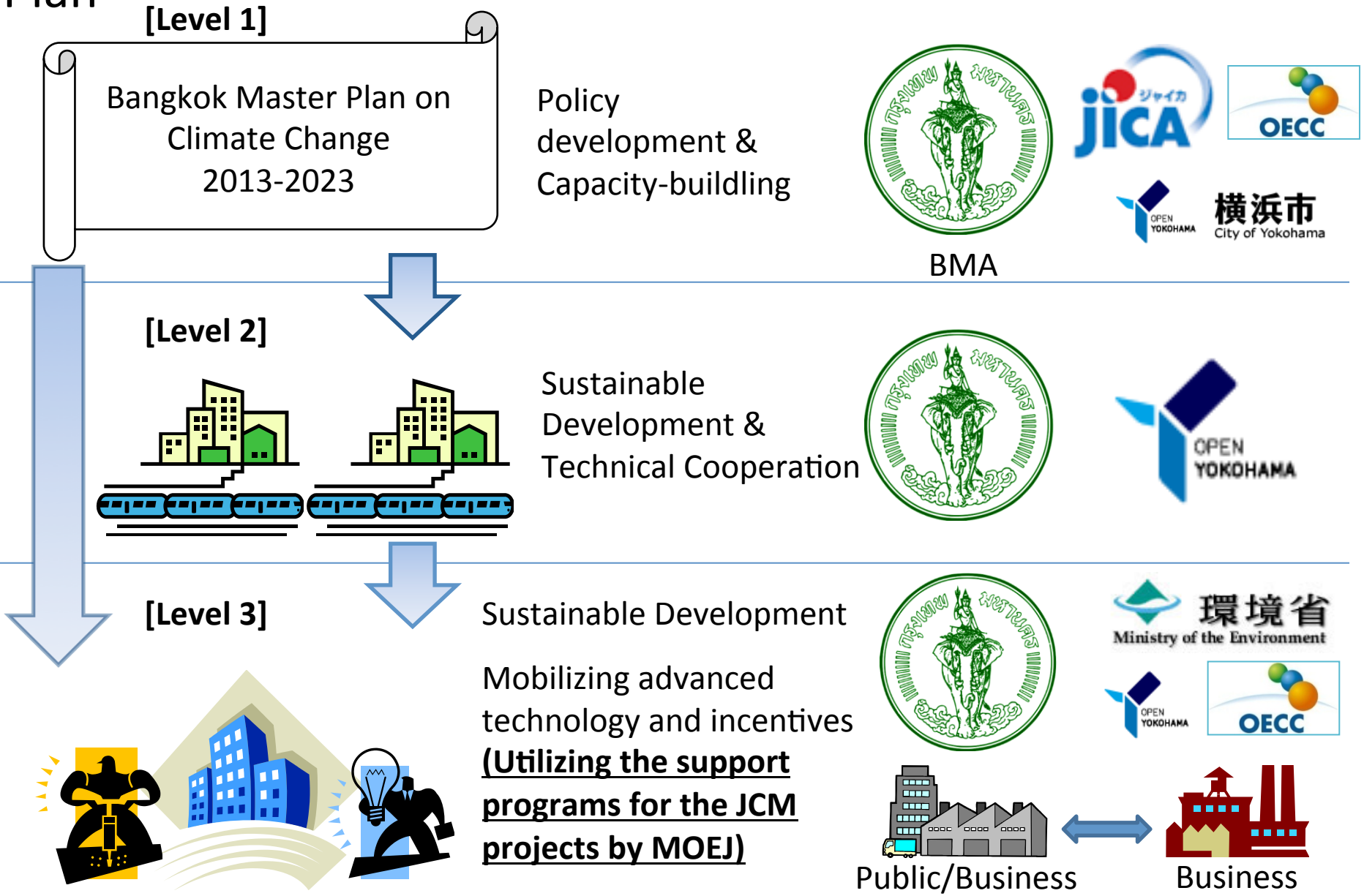
#### Climate Change Master Plan

- Energy
- Transport
- Waste management
- Turban Green Planning
- Adaptation

## Focal Areas of Cooperation

- (1) Energy management, public transport, waste and wastewater etc.
- (2) Participation by the private sector, academia, and local communities
- (3) Call for participation by the Thai and Japanese Government and international organization for their support
- (4) Information sharing

# Background: Towards implementation of Bangkok Master Plan



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## Bangkok Master Plan on Climate Change

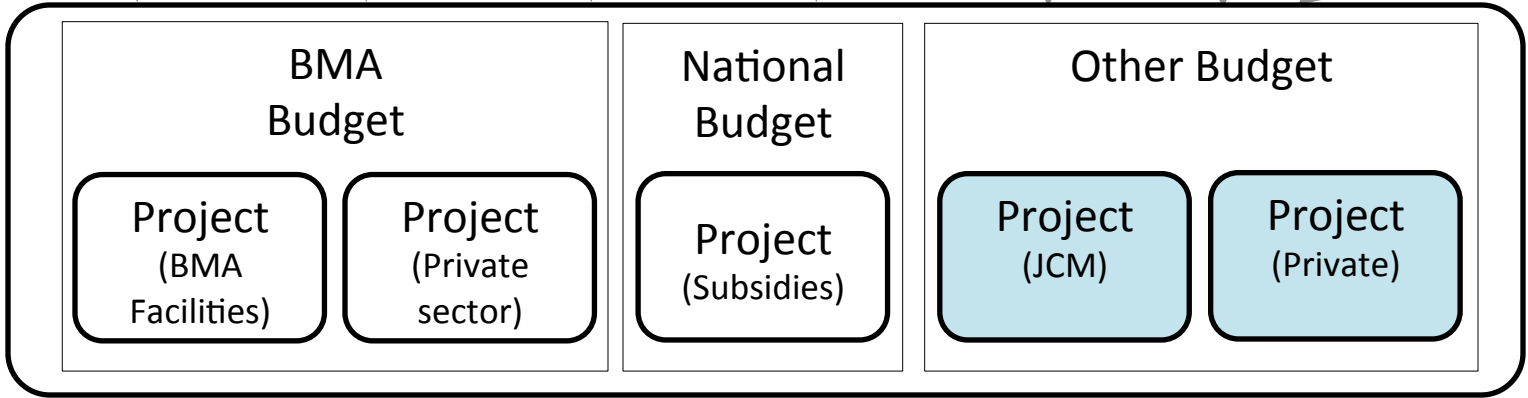
Monitoring  
Evaluation

Institutional arrangement for coordination

Secretariat



- Transport Task Force
- Energy Task Force
- Waste & Wastewater Task Force
- Urban Green Planning Task Force
- Adaptation Task Force



Stakeholders  
↑ Implementation

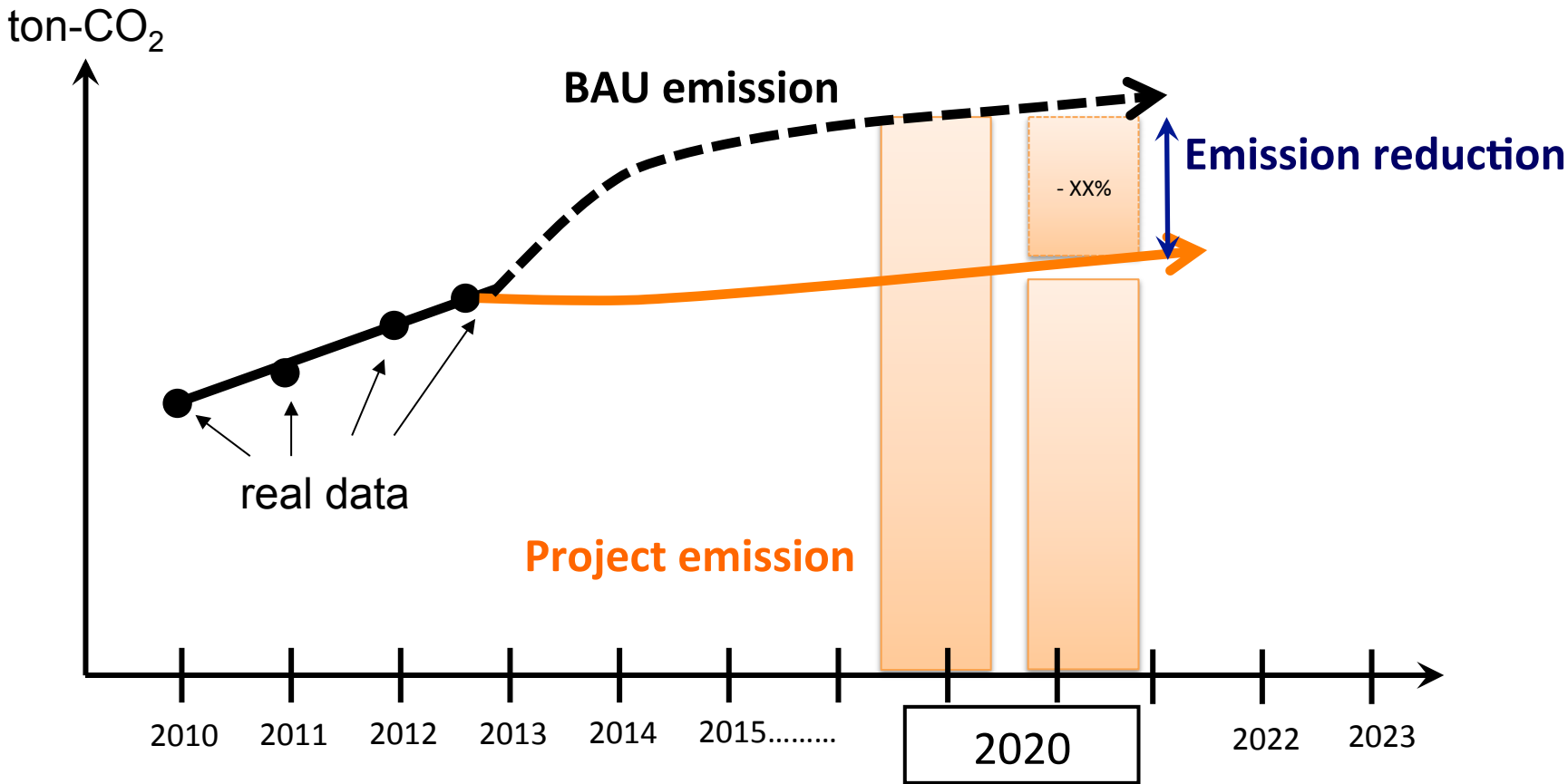
Drafting  
Capacity Development  
Capacity Development

Project design



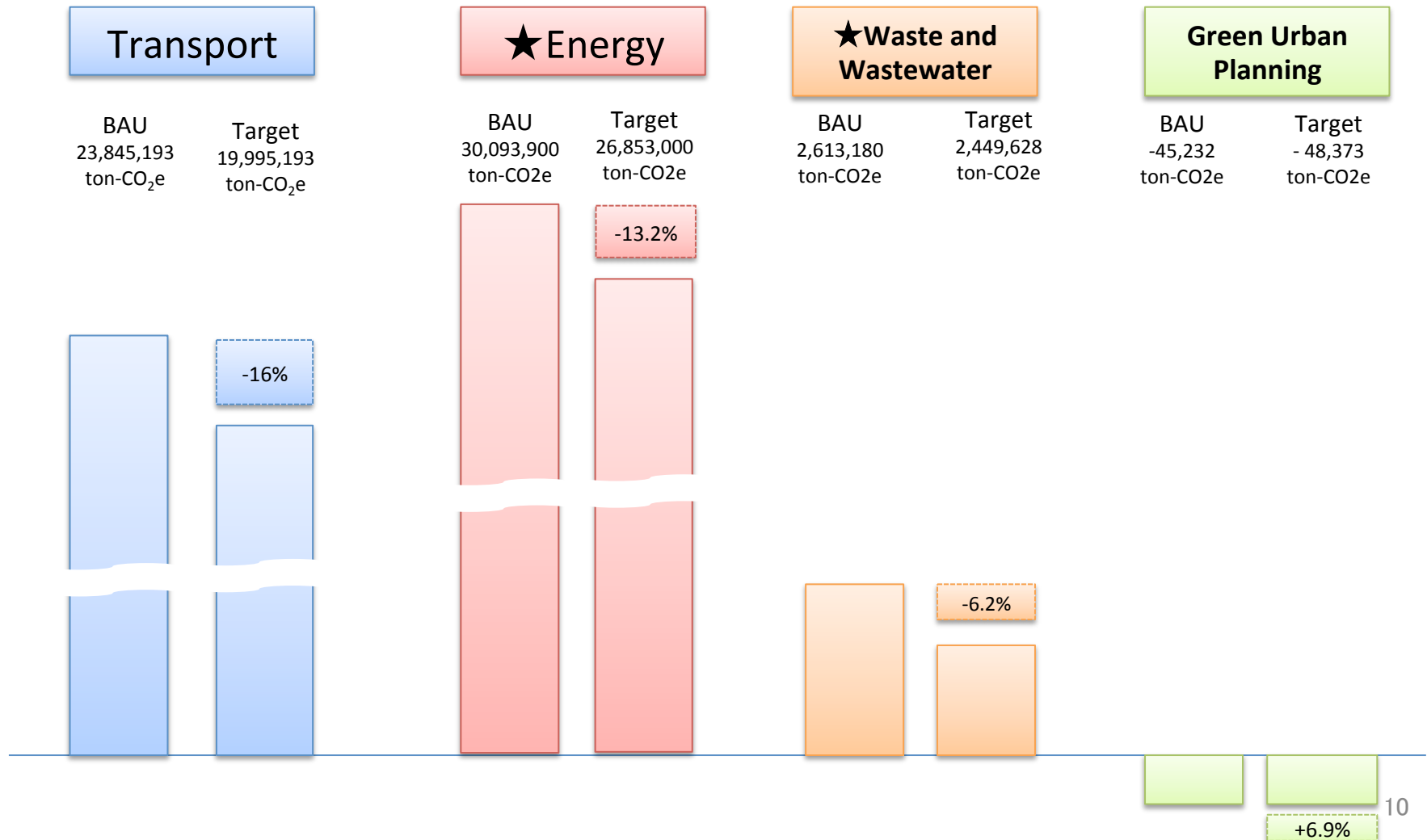
# Background: Bangkok Master Plan

BMA, representing a leading City of Southeast Asia and the world, in partnership with national government ministries and agencies, the City of Yokohama, and OECC, takes proactive measures to mitigate and adapt to climate change in the short, mid, and long term.



# Background: Scope and emissions reduction goals

(1) Environmental Sustainable Transport; (2) Energy Efficiency and Alternative Energy; (3) Efficient Solid waste management and Wastewater Treatment, (4) Green Urban Planning; and (5) Adaptation planning.



# Outline of Feasibility Study in FY 2015



- ✓ **Study Name:** JCM projects development (energy efficiency, and waste and waste water) under the Bangkok Master Plan on Climate Change, and study on financial and other facilitation schemes for introducing low carbon technologies
- ✓ **Objective:** To identify and select potential projects that can reduce CO2 emission and support the implementation of the Bangkok Master Plan on Climate Change
- ✓ **Period:** April 2015 to February 2016
- ✓ **Target sectors:** energy efficiency, and waste and waste water
- ✓ **Study participants:** Overseas Environmental Cooperation Center, Japan (OECC) , Yokohama City, finetech inc., InterAct Inc., JFE Engineering Corporation
- ✓ **\*Financial support for the study is provided by the Ministry of the Environment, Japan**

# Structure of the Feasibility Study in FY 2015

## Study on Energy efficiency, Waste & Waste water sector

Bangkok Metropolitan Administration, City of Yokohama, TGO, DEDE, (Secretariat) OECC, InterAct

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### Energy Efficiency Group Alliance

(Y-PORT Members and Private Sector in Bangkok)

Cluster1 : ESCO Companies, Engineering Service Companies

Cluster 2 : Energy Efficiency project owners  
(Owners and sites are Identified)  
BMA hospitals, Private hospitals  
Industrial Parks

Cluster3 : Finance and trading companies

### Waste Project Development

( Y-PORT Members and Private Sector in Bangkok)

Cluster1 : J corporation  
(JCM project at large-scale incineration plant)

Cluster 2: F corporation  
(Waste disposal of public facilities)

Cluster 3: Project Development (wastewater)  
(Low carbon tech. for a new waste water treatment plant planed by BMA)

### Expected Outputs

- ✓ Realization of JCM projects of hospitals (subsidy program etc.)
- ✓ Elaboration of applying "Program approach for building energy efficiency" and program support scheme with introduction of private finance
- ✓ Introduction of Energy Code such as CASBEE
- ✓ Developing JCM project in Industrial Parks

### Expected Outputs

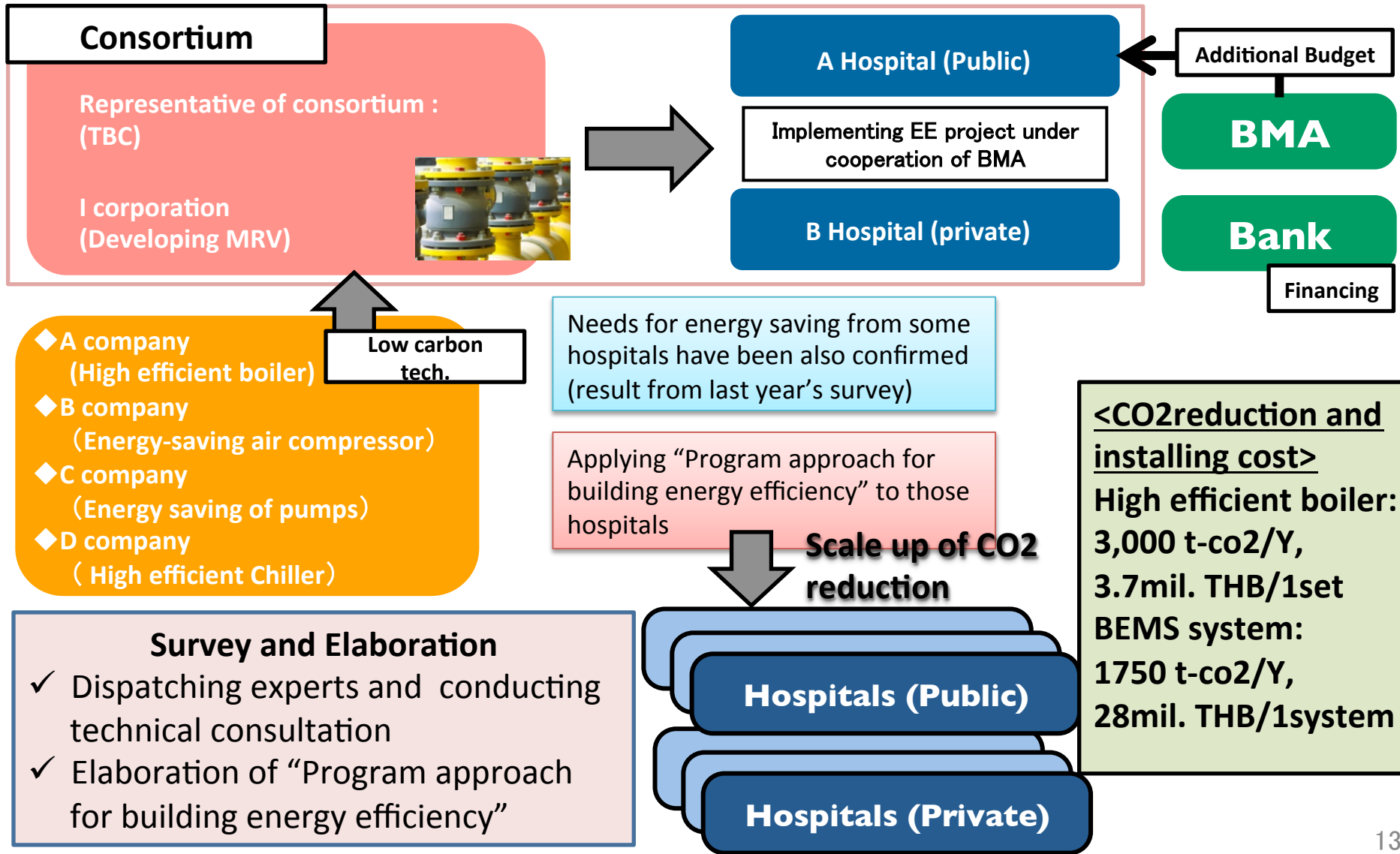
- ✓ Realization of JCM projects (subsidy program etc.)
- ✓ Elaboration of JCM project plans at incineration plants in Bangkok and other administrative procedure
- ✓ Project development of JCM for waste water plants

## Study on Potential JCM projects

(Y-PORT Members and Private Sector in Bangkok)

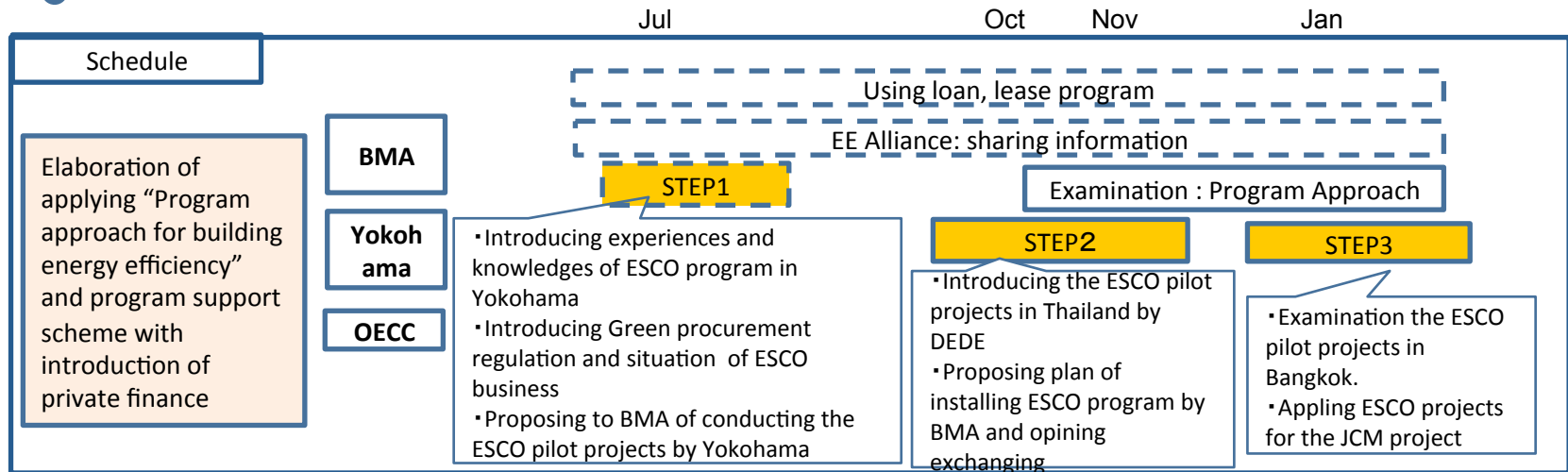
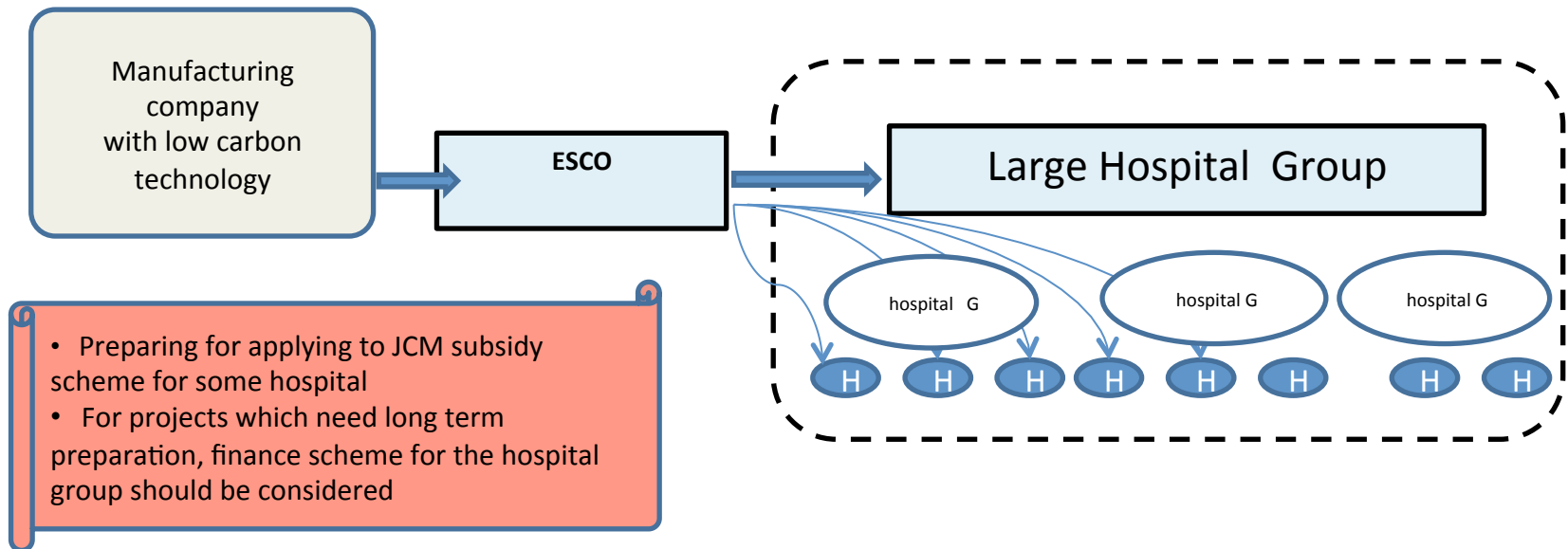
- ✓ Elaboration of JCM projects which identified by last year's survey
- ✓ Technical consultation and by Japanese experts and data collecting which is useful for JCM project development

# Energy efficiency sector : Elaboration of applying “Program approach for building energy efficiency” and program support scheme with introduction of private finance

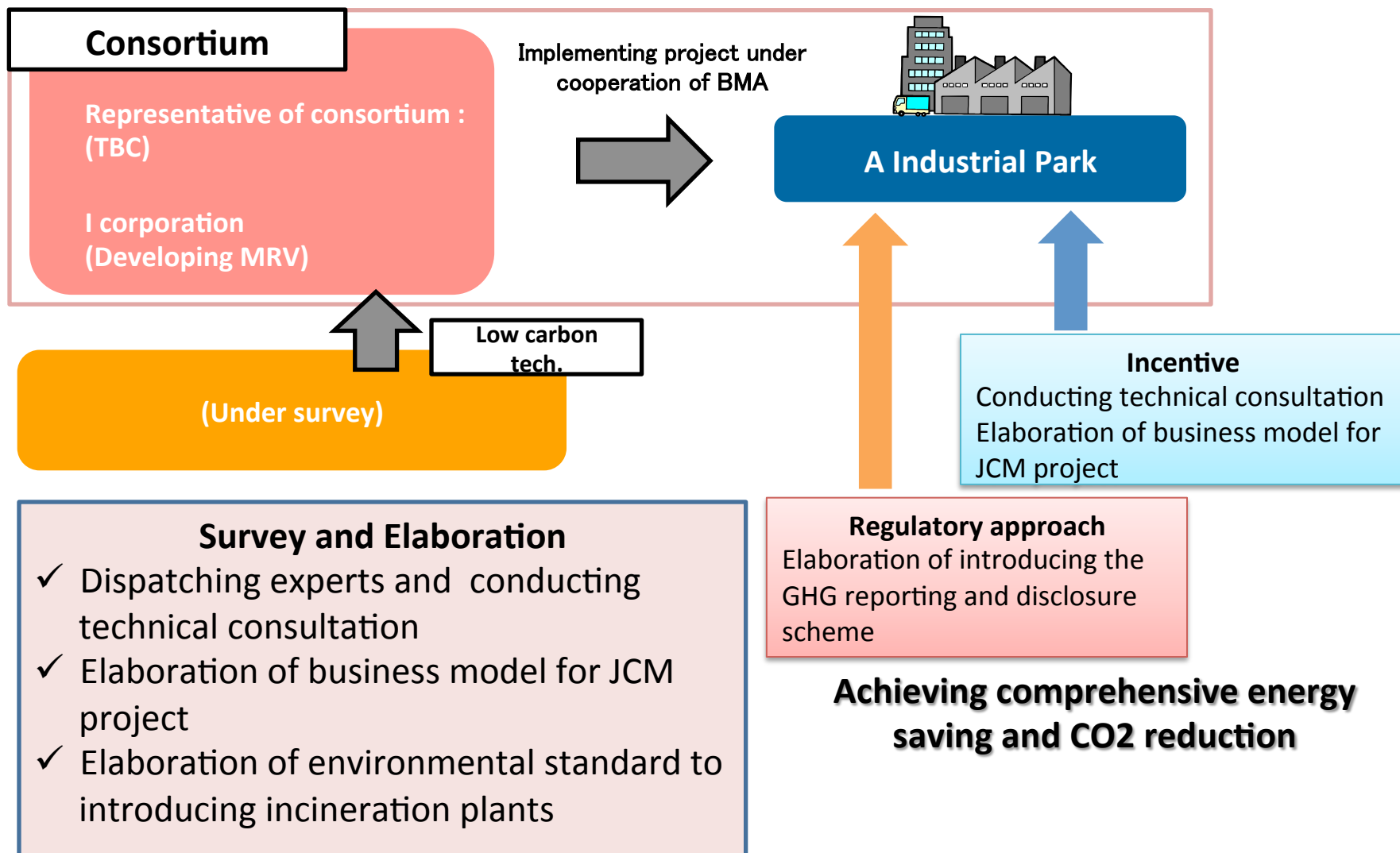


# Expanding Green Hospital Concept

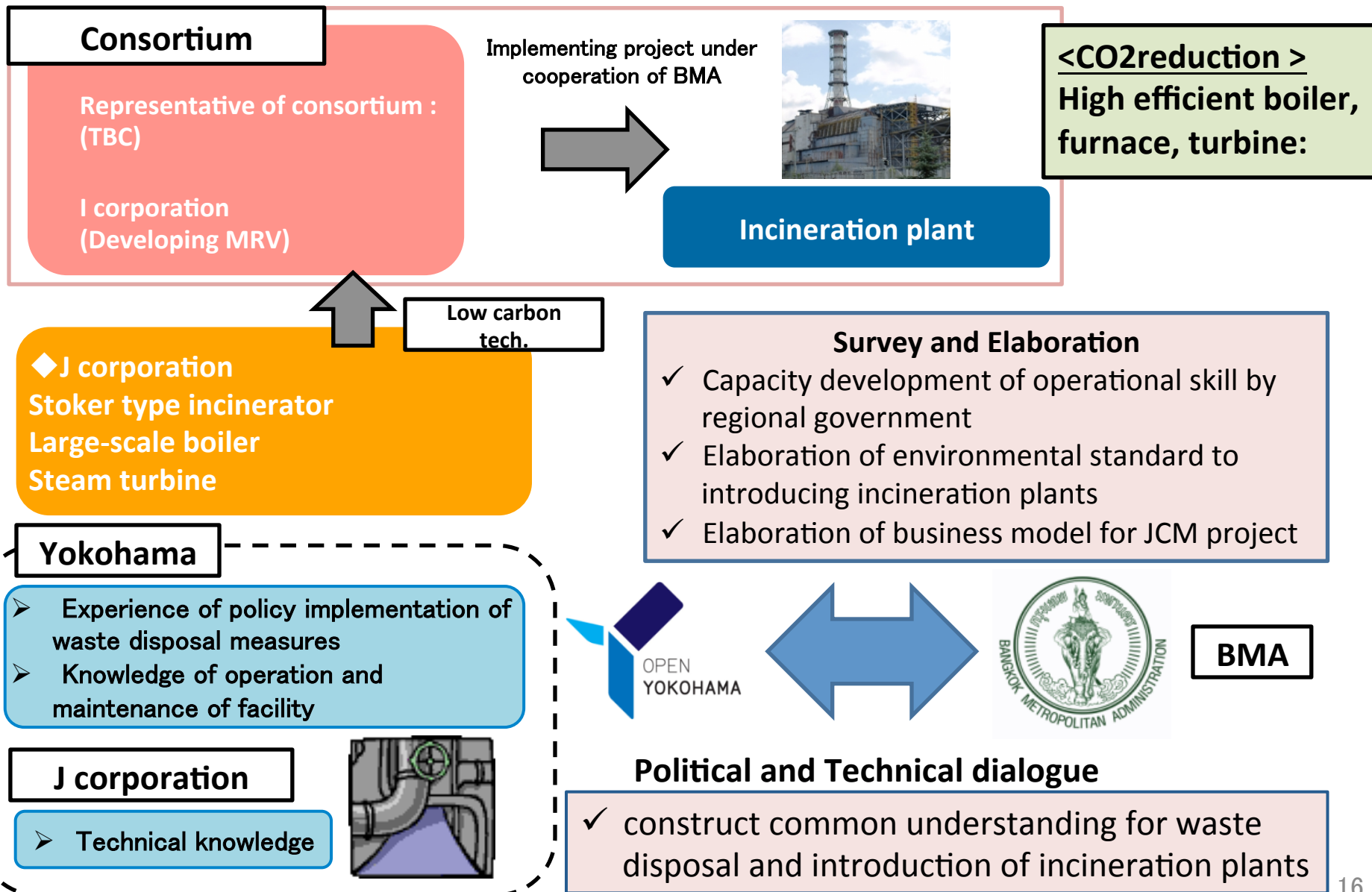
Energy efficiency : Elaboration of applying “Program approach for building energy efficiency” and program support scheme with private finance (Hospital)



# Energy efficiency sector : Elaboration of comprehensive energy saving in the industrial park

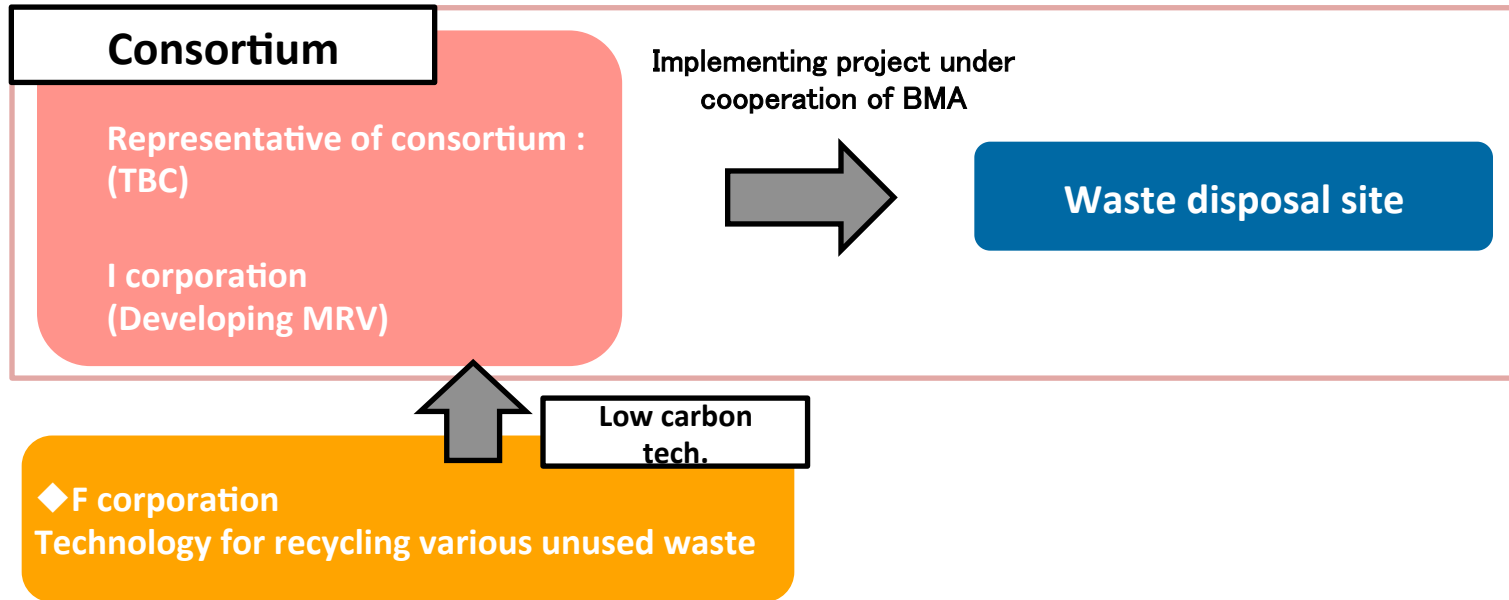


# Waste & Waste water sector : Elaboration of JCM project plans at incineration plants in Bangkok and other administrative procedure



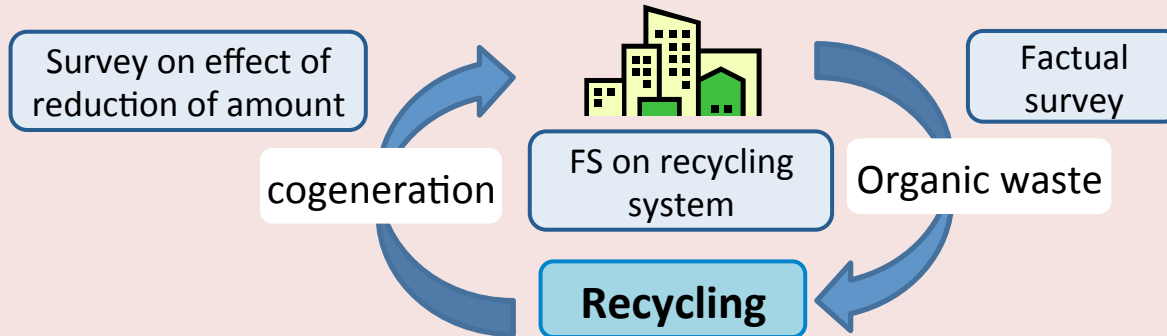


# Waste & Waste water sector : Project development of JCM for waste disposal of public facilities



## Image of the recycling system and Surveys

Residential area



finetech : Technology for recycling various unused waste

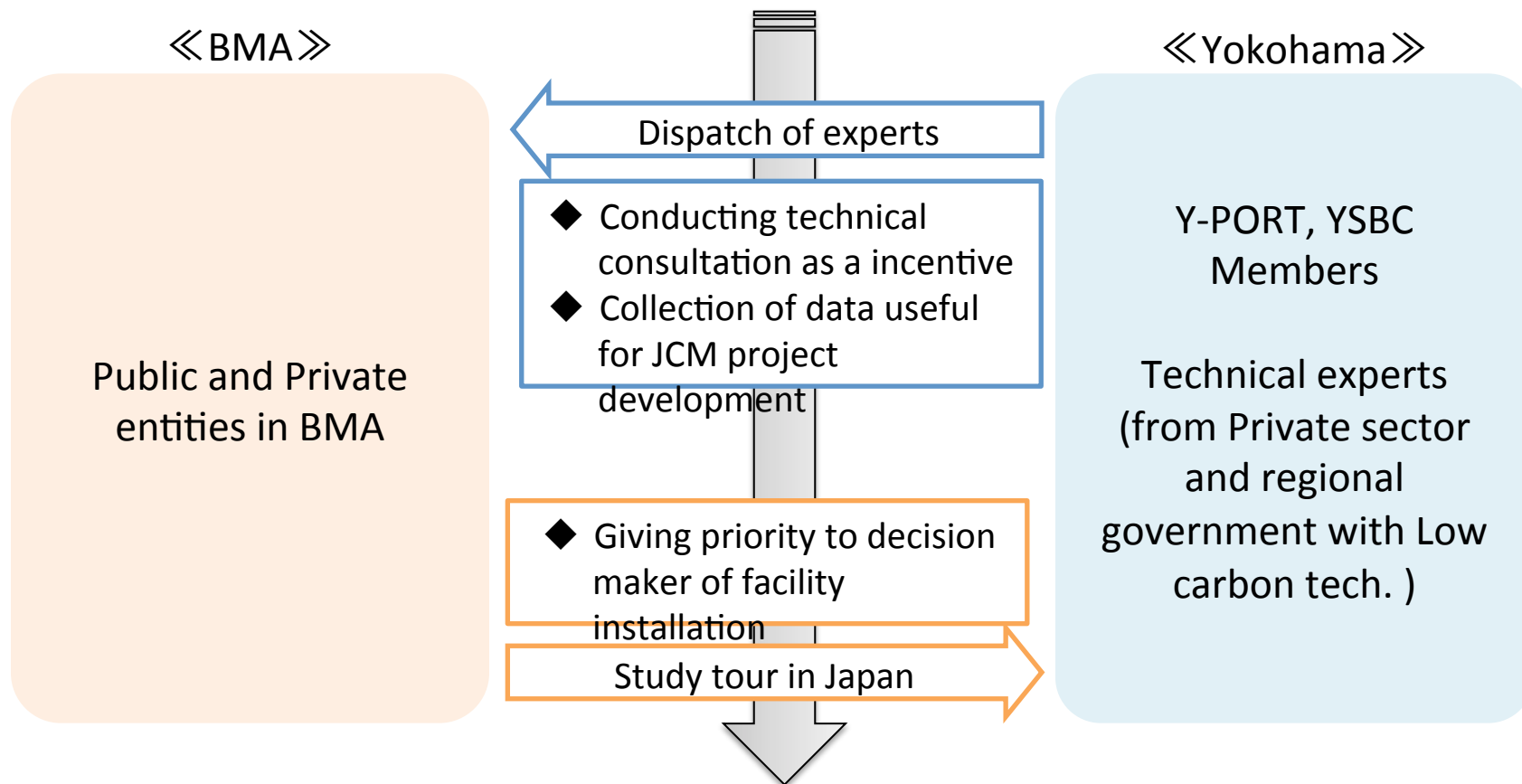
## Other survey and elaboration

- ✓ Survey on pickup system of general waste in Thailand and in central and regional governments

# Survey on potential JCM projects development

## Current status

- (1) Needs from Thailand companies clarified last year's survey
- (2) GHG reduction measures proposed under BMA Master Plan on Climate Change



## Expected output

- (1) Clarifying compatibility of tech., requirements of JCM scheme
- (2) Finding GHG reducing PJ → Clarifying Feasibility of JCM project development

# Financing Programme for JCM Model Projects by MOEJ

*The budget for FY 2015*

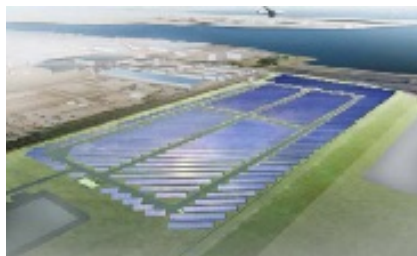
*2.4 billion JPY (approx. **USD24 million**) per year by FY2017  
(total 7.2 billion JPY)*

Finance part of an investment cost  
(**up to the half**)

**Government of Japan**

Conduct MRV and expected to deliver at least half of JCM credits issued

**International consortiums  
(which include Japanese entities)**



- Scope of the financing: facilities, equipment, vehicles, etc. which reduce CO<sub>2</sub> from fossil fuel combustion as well as construction cost for installing those facilities, etc.
- Eligible Projects : starting installation after the adoption of the financing and finishing installation within three years.

# Support Program Enabling “Leapfrog” Development (Finance/ADB) by MOE

## Collaborative Financing Programme

### Budget for FY 2015[Budget for FY2014]

1.8 billion JPY (approx. USD18 million) per year by FY2018  
(total 7.2 billion JPY) [4.2 billion JPY]

### Scheme

To finance the projects which have the better efficiency of reducing GHG emission in collaboration with other projects supported by JICA and other governmental-affiliated financial institute.

### Purpose

To expand superior and advanced low-carbon technologies for building the low carbon society as the whole city wise and area wise in the wider fields, and to acquire credits by the JCM.

## ADB Trust Fund (JF JCM)

### Budget for FY 2015[Budget for FY2014]

1.8 billion JPY (approx. USD18 million)[1.8 billion JPY]

### Scheme

To provide the financial incentives for the adoption of the advanced low-carbon technologies which are superior in GHG emission reduction but expensive in ADB- financed projects.

### Purpose

To develop ADB projects as the “Leapfrog” developments by the advanced technologies and to show the effectiveness of the JCM scheme by the acquisition of credits of the JCM.

JICA, other

Financial assistance/Financial investments for overseas investment and lending

Supported Project by JICA, etc.

Collaboration

JCM Project

- Waste to Energy Plant
- Renewable Energies
- Water Supply and Sewage Systems
- Transportation

MOEJ

Finance

Contribution

ADB Trust Fund

Finance

Superior Advanced Low Carbon Technologies

ADB Project

GHG Emission Reduction

Thank you!