



環境省

Ministry of the Environment  
Government of Japan

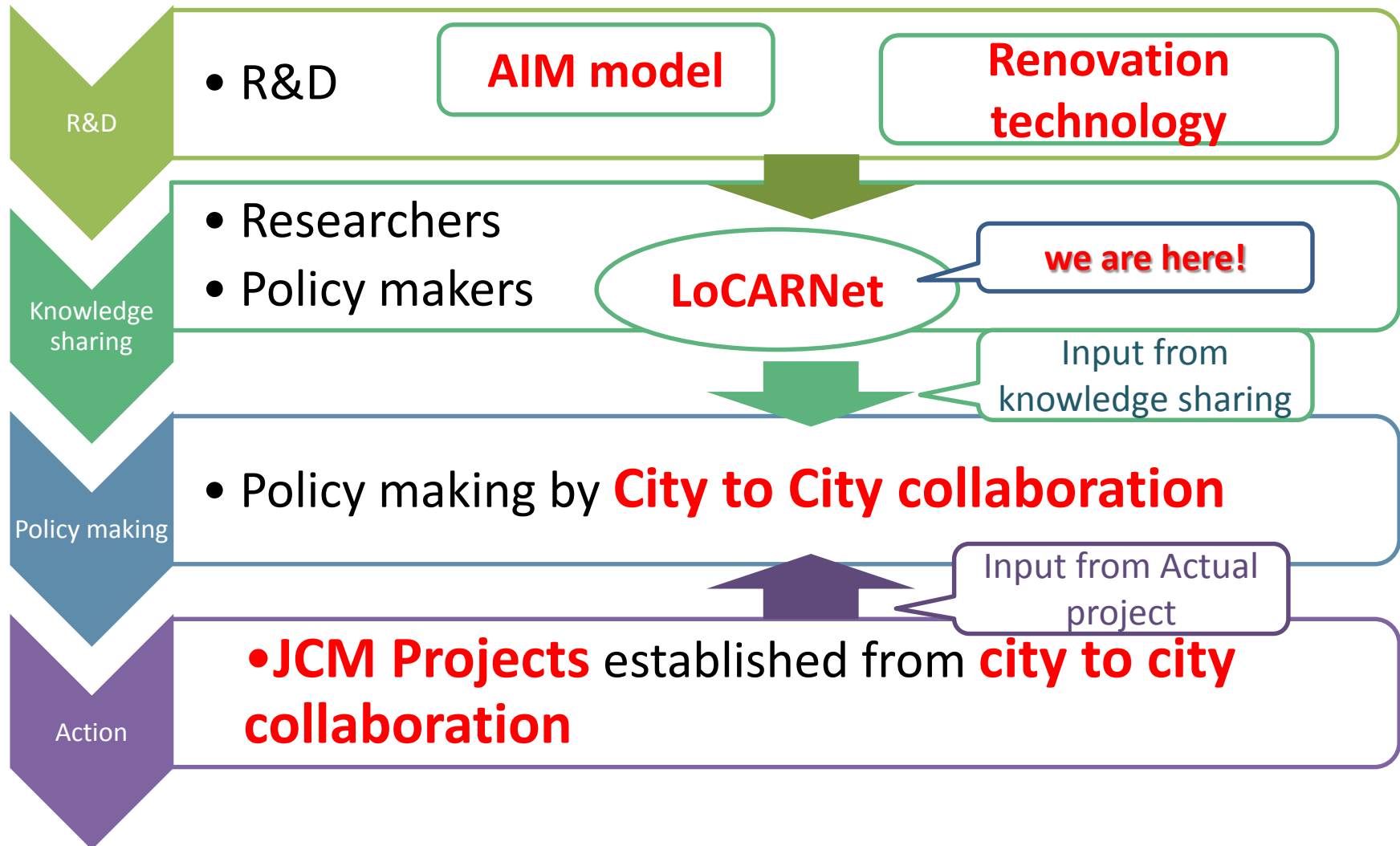
# MOEJ's Environmental Cooperation through City-to-city collaboration in Asia

November 1st, 2017

**Ryuzo SUGIMOTO**

Ministry of the Environment, Japan (MOEJ)

# MOEJ Contribution for Low Carbon Development in Asia



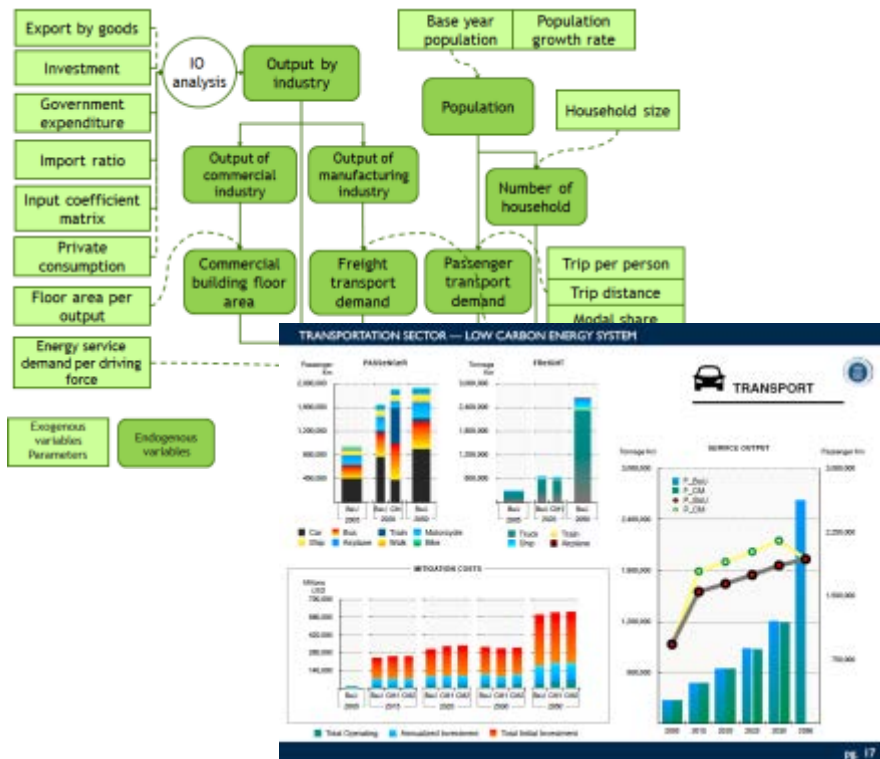
# **1. MOEJ Contribution for R&D for Low Carbon Development in Asian Countries**

# Case of AIM ~What is AIM?~

## ■ Asia-Pacific Integrated Model (AIM) is

- family of analytical models
- contributes IPCC reports, and climate change mitigation actions
- can be regarded as “researchers network”

## Model



Example of AIM's structure and output

## Researchers Network



21th AIM International Workshop

# AIM activities in Asia

- AIM has contributed processes to formulate climate policy in Japan, and the activities are expanded to Asia. **AIM has been involved in formulation processes of low carbon policies through collaboration with Asian researchers.**
- “Asia Low Carbon Society Research (LCSR) Project” funded by MoEJ is launched. The project includes **not only making low carbon scenarios but also designing practical programs to realize LCS** in target regions.



## Target Regions FY2014 -

**National**

- Thailand
- Indonesia
- Malaysia
- Cambodia
- Vietnam

**City**

**[Vietnam]**

- Ho Chi Minh
- Da Nang
- Hai Phong

**[Malaysia]**

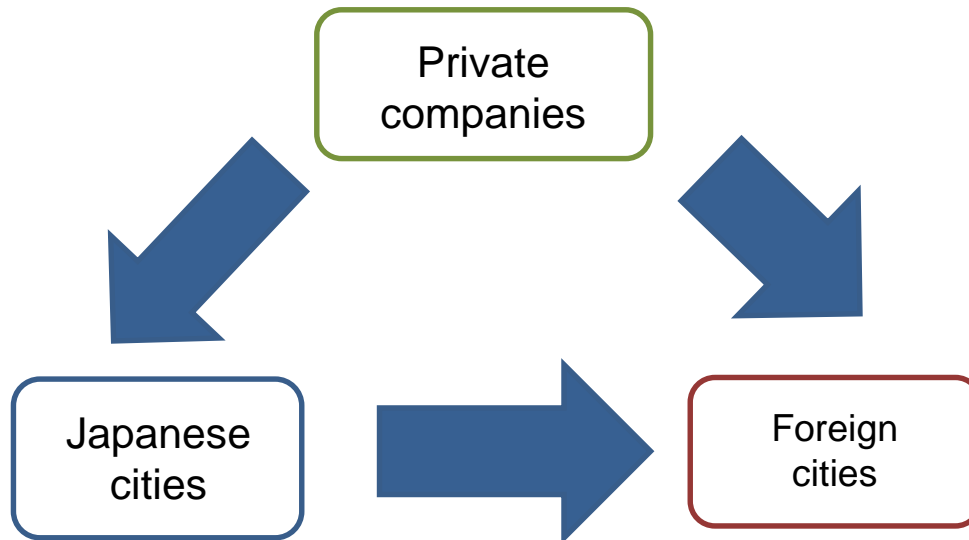
- Putrajaya
- Iskandar

## **2. MOEJ Contribution for Policy making through JCM City to City collaboration**



# Basic concept of City to city collaboration program

**Japanese Cities transfer knowledge and experience to promote low carbon society with private sectors' support.**



## ● Role of Japanese cities

- Support to design master plan and action plan
- Support to design the technical evaluation criteria and environment criteria

## ● Role of private companies

- Survey for local needs for projects
- Survey for suitable technology and vendors for projects
- Organizing the workshop in local cities

## ◆ Effect

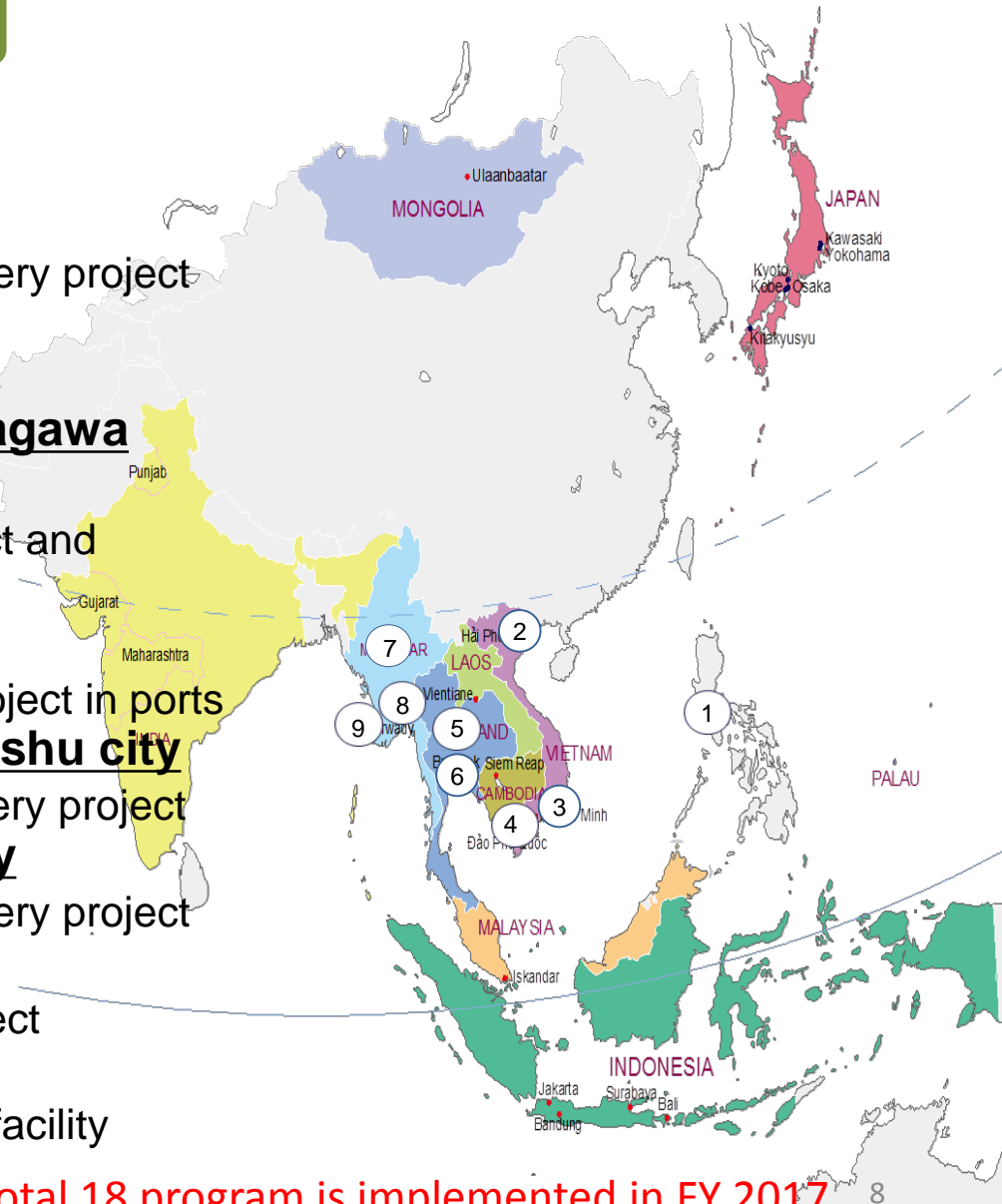
- Support **to create low carbon project** efficiently
- Support to design **the local systems** to promote low carbon projects (ex: **master plan, action plan**)
- **Capacity building** ; informative advise and lecture during the selection and evaluation of suitable technology and project management





## FY2017 Collaboration studies

1. Quezon City (Philipine) – Osaka city
  - PV solar project and energy saving project
2. Haiphong city(Vietnam) – Kitakyushu city
  - Waste to energy project and exhaust heat recovery project
3. Ho Chi Minh city(Vietnam) – Osaka city
  - Energy saving project
4. Phnom Penh city – Kitakyushu city / Kanagawa prefecture
  - Renewable energy project , energy saving project and waste to energy project
5. Bangkok city- Yokohama City
  - Renewable energy project and energy saving project in ports
6. Chiangmai prefecture(Thailand) – Kitakyushu city
  - Waste to energy project and exhaust heat recovery project
7. Mandalay city(Myanmar) – Kitakyushu city
  - Waste to energy project and exhaust heat recovery project
8. Yangon city (Myanmar) – Kawasaki city
  - Waste to energy project and energy saving project
9. Ayeyarwady region – Fukushima city
  - Energy saving project in waste water treatment facility



Total 18 program is implemented in FY 2017 8



# Hai Phong Green Growth Action Plan Development

Kitakyushu Urban Centre, Nikken Sekkei Civil Engineering Ltd., NTT Data Institute of Management Consulting Inc. etc.

FY2014 "Large-scale JCM Development Programme for Low Carbon Society in Asia"

CO2 emission reduction by Pilot Project implementation and dissemination: Approx. 120,000 (target year 2020)

Japan-side

Vietnam-side

**City of Kitakyushu**

Project Manager

**IGES**

Kitakyushu Asian Center for Low Carbon Society



Sister City Agreement (April 2014)

**City of Hai Phong**

The People's Committee

Foreign Affairs Office,  
Planning and Investment  
Bureau

## Low carbon City Development

Green Growth Action Plan Development

**Nikken Sekkei Civil Engineering Ltd.**  
M. I. Consulting Group Corp.

**Develop Hai Phong Green Growth Action Plan, Select Pilot project**



**Mayor of City of Kitakyushu visited Hai Phong And Reported the final report (May 2015)**

## Energy sector

waste heat recovery and power generation in Cement Plant ,  
Energy saving in Commercial facilities/factory,  
LED lighting on roads, etc.

**NTT Data Institute of Management Consulting Inc.**  
University of Kitakyushu

## Waste sector

General waste separation and composting  
production of raw materials for cement from industrial waste, etc.

**NTT Data Institute of Management Consulting Inc.**  
Nishihara Corporation  
Amita Corporation

## Cat Ba Island conservation

resource recycling (biogas, solid fuel etc.) ,  
Solar power generation

**NTT Data Institute of Management Consulting Inc.**  
AMITA Institute for Sustainable Economies Co.,Ltd.

# Hai Phong Green Growth Action Plan Development

City of Hai Phong act by themselves and try to realize Green Port City

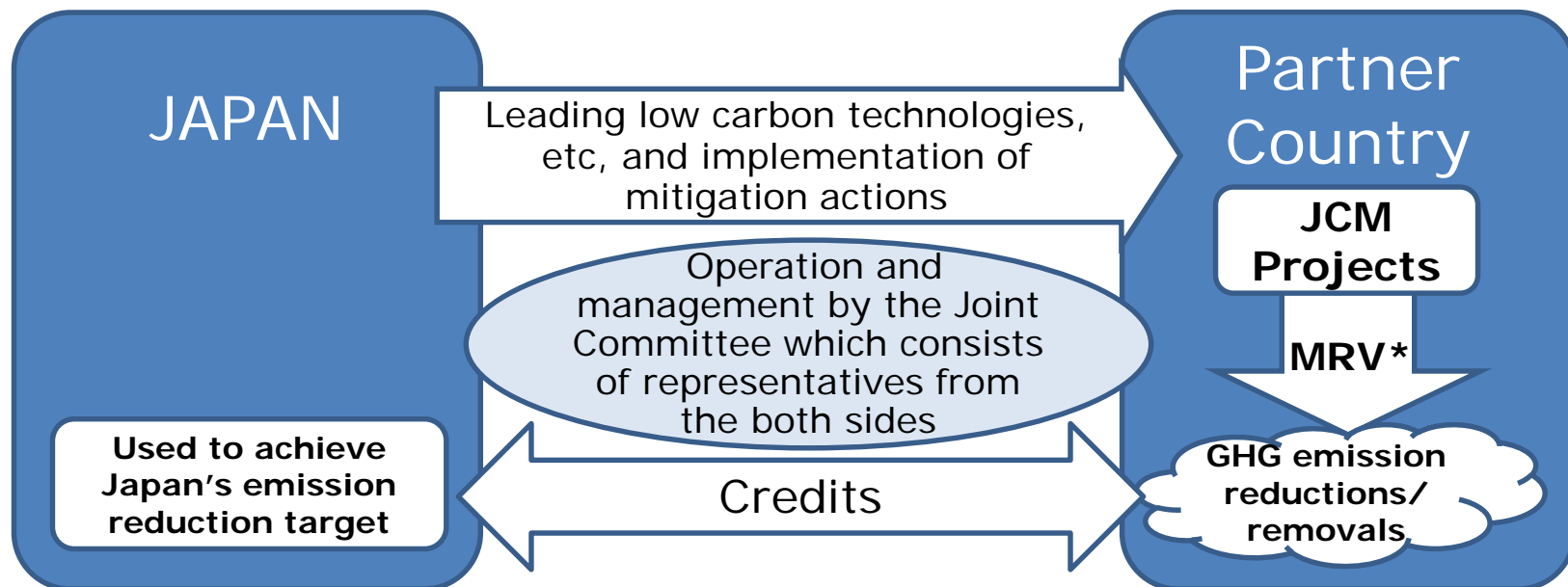


### **3. MOEJ Contribution for the action through JCM Projects implementation**



## JCM basic concept

- 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.



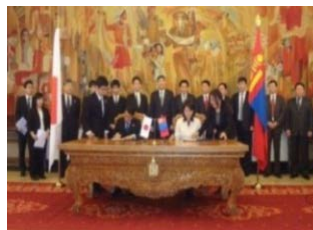
\*measurement, reporting and verification





# JCM partner countries

Japan has held consultations for the JCM with developing countries since 2011 and has established the JCM with Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Viet Nam, Lao PDR, Indonesia, Costa Rica, Palau, Cambodia, Mexico, Saudi Arabia, Chile, Myanmar, Thailand and Philippine.



1. Mongolia  
Jan. 8, 2013  
(Ulaanbaatar)



2. Bangladesh  
Mar. 19, 2013  
(Dhaka)



3. Ethiopia  
May 27, 2013  
(Addis Ababa)



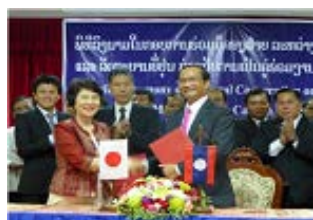
4. Kenya  
Jun. 12, 2013  
(Nairobi)



5. Maldives  
Jun. 29, 2013  
(Okinawa)



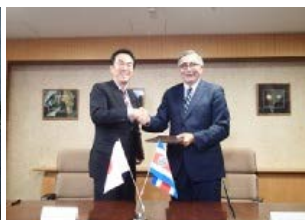
6. Viet Nam  
Jul. 2, 2013  
(Hanoi)



7. Lao PDR  
Aug. 7, 2013  
(Vientiane)



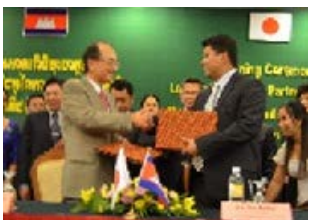
8. Indonesia  
Aug. 26, 2013  
(Jakarta)



9. Costa Rica  
Dec. 9, 2013  
(Tokyo)



10. Palau  
Jan. 13, 2014  
(Ngerulmud)



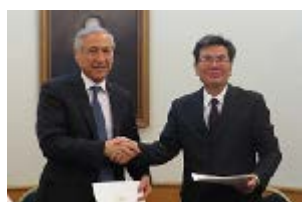
11. Cambodia  
Apr. 11, 2014  
(Phnom Penh)



12. Mexico  
Jul. 25, 2014  
(Mexico City)



13. Saudi Arabia  
May 13, 2015



14. Chile  
May 26, 2015  
(Santiago)



15. Myanmar  
Sep. 16, 2015  
(Nay Pyi Taw)



16. Thailand  
Nov. 19, 2015  
(Tokyo)



17. Philippine  
Jan. 12, 2017  
(Manila)



# JCM model project by Ministry of Environment Japan

The budget for projects starting from FY 2017 is **6.0 billion JPY (approx. USD 60million)** in total by FY2019

(1 USD = 100 JPY)

✕ Includes collaboration with projects supported by JICA and other governmental-affiliated financial institute.

Finance part of an investment cost (less than half)

**Government of Japan**

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

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

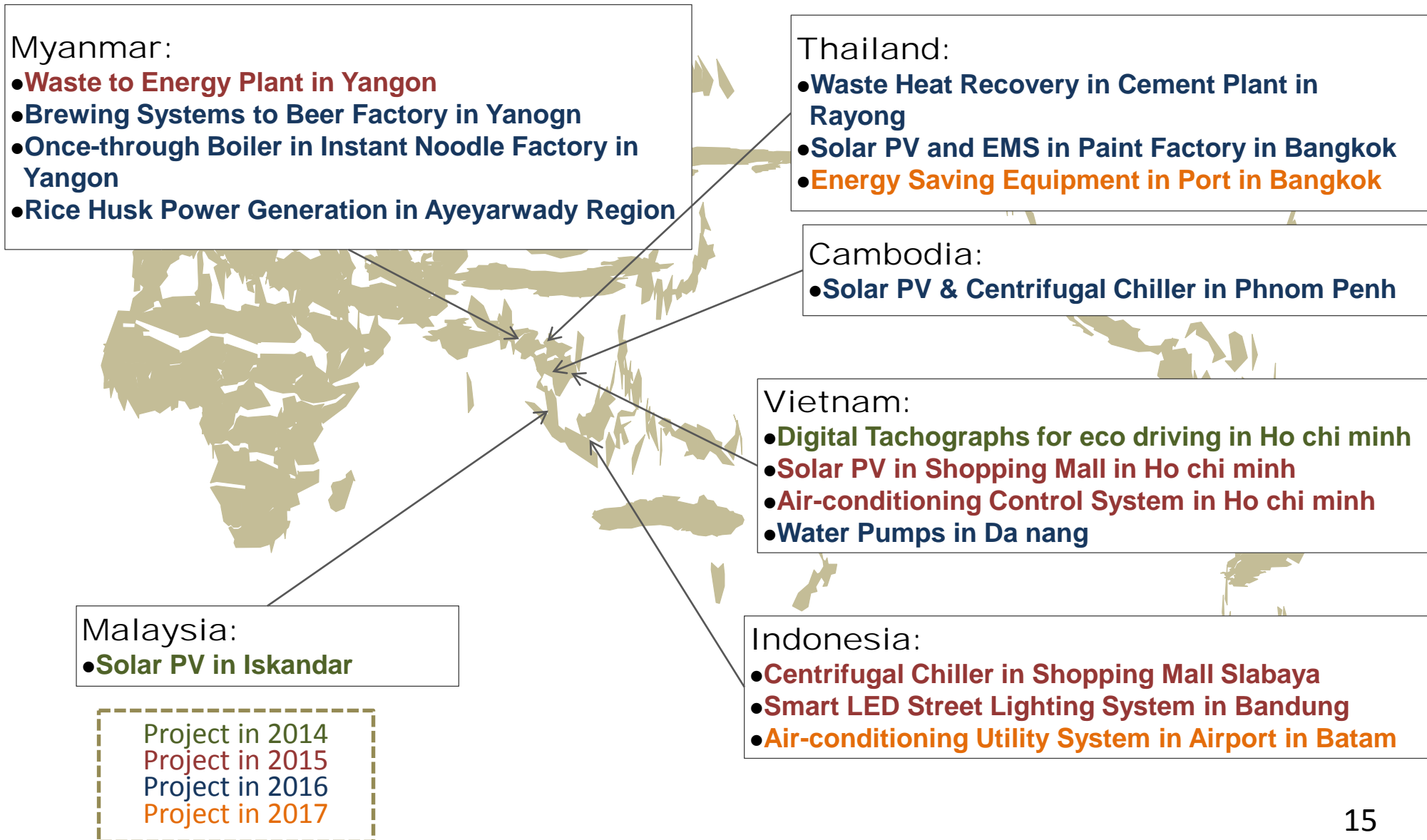


- Scope of the financing: facilities, equipment, vehicles, etc. which reduce CO<sub>2</sub> from fossil fuel combustion as well as construction cost for installing those facilities, etc.
- Eligible Projects : starting installation after the adoption of the financing and finishing installation within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



# JCM projects established from city to city collaboration

The following map shows the areas of JCM projects developed from city to city collaboration study

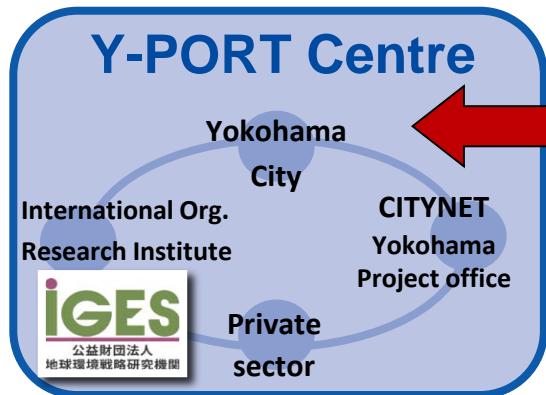






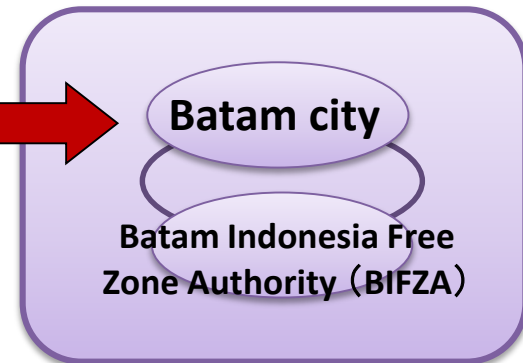
# Yokohama-Batam Collaboration in FY2016

Japanese side



Letter of Intent on technical cooperation (May 2015)  
Task force team (Jan 2016)

Indonesian side



Co-organizing workshops Energy Sector

Nippon Koei Co., Ltd.

Support for JCM project development  
Methodology Development  
Workshop arrangement etc.

Facilitation

Technical support

iFORCOM Tokyo Co., Ltd.

A/C Eco-operation

Public Buildings, Hospitals, Private Hotels

FINETECH Co., Ltd.

Energy efficiency

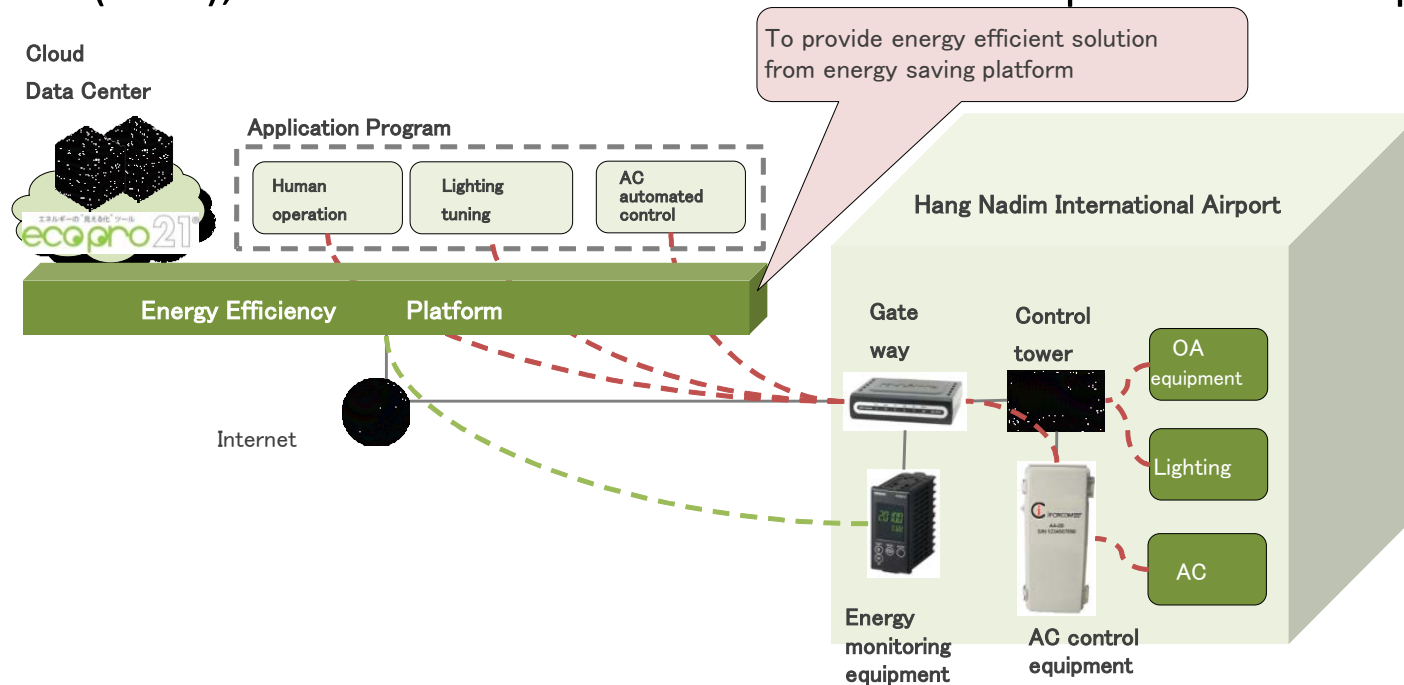
High efficiency thermal desorption unit  
(PT Mega Green Technology)



# Air-conditioning Utility System in Airport in Batam

## Outline of GHG Mitigation Activity

- Introduction of utility systems in the airport terminal in Batam Hang Nadim
- Installation of chiller in light of the proper environment construction, tuning of the air conditioner (AHU), the inverter control of the start-stop control and pump for the chiller



## Expected GHG Emission Reductions

**533tCO<sub>2</sub>/year**

← (reference power consumption - project power consumption) X grid electricity coefficient

### **3. Informative Links**

For more information, please visit

## 1. JCM City-to-city Collaboration

<New Mechanism Information Platform>

<http://www.mmechanisms.org/e/index.html>

<Web Portal for Low Carbon Development in Asia>

<http://www.env.go.jp/earth/coop/lowcarbon-asia/english/index.html>

## 2. High-level Seminar and ASEAN ESC Model Cities Program

<http://environment.asean.org/asean-working-group-on-environmentally-sustainable-cities/>

<http://www.hls-esc.org/>

**Thank you for your attention !**