



Ministry of the Environment

Recent development of international environmental cooperation

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Ministry of the Environment, Japan (MOEJ)

17th January, 2020

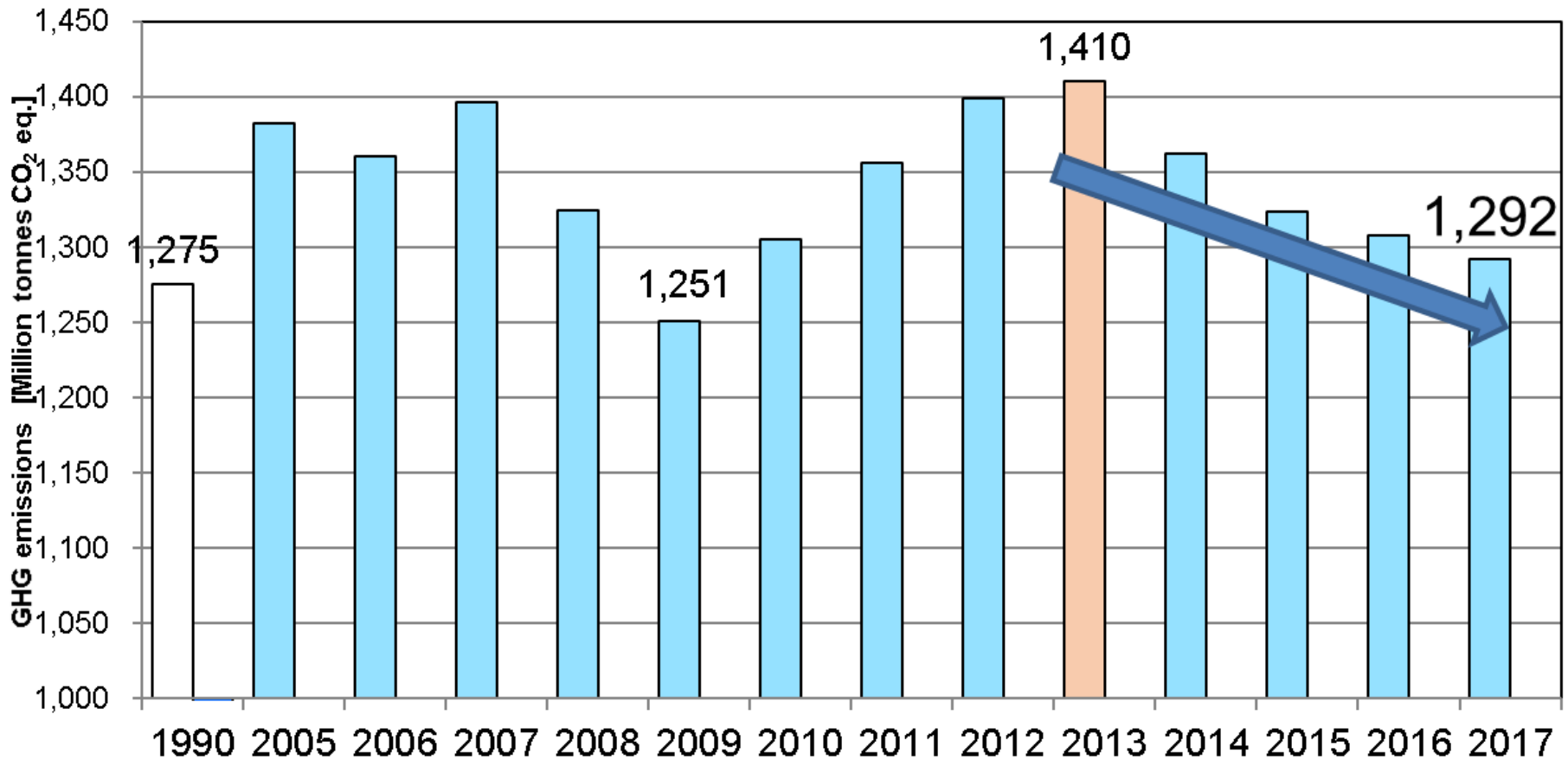


Mitigation Measures

Japan's Long-term Strategy under the Paris Agreement

Vision

Proclaiming a “**decarbonized society**” as the ultimate goal and aiming to accomplish it ambitiously **as early as possible in the second half of this century**



Meeting on a Long-Term Strategy under the Paris Agreement as Growth Strategy



< Direction of Consideration >

- ① Stimulate active green finance, not by adhering to existing forms of regulations, but by advancing the disclosure of information and transparency.
- ② Promote measures on a global scale, including developing countries, by shifting from support centered on public funding to private financing led by businesses.
- ③ Combine the wisdom of not only the public and private sectors but also the world, setting ambitious goals towards fostering revolutionary innovation.

Mitigation Measures



CARBON
NEUTRALITY
COALITION

JAPAN joined in Sep. 2019



Bilateral meeting with Prime Minister Ardern, in Sep. 2019

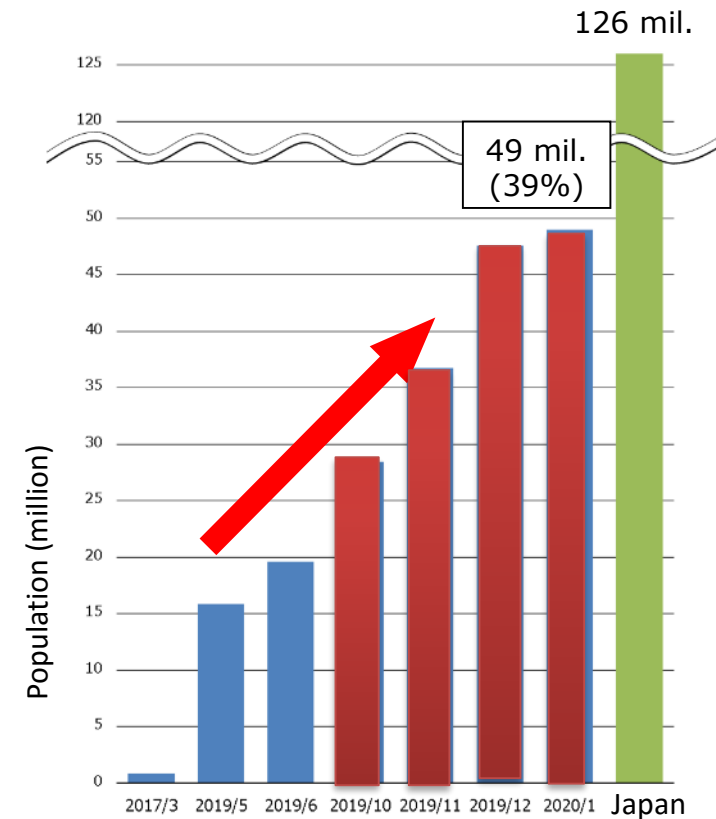
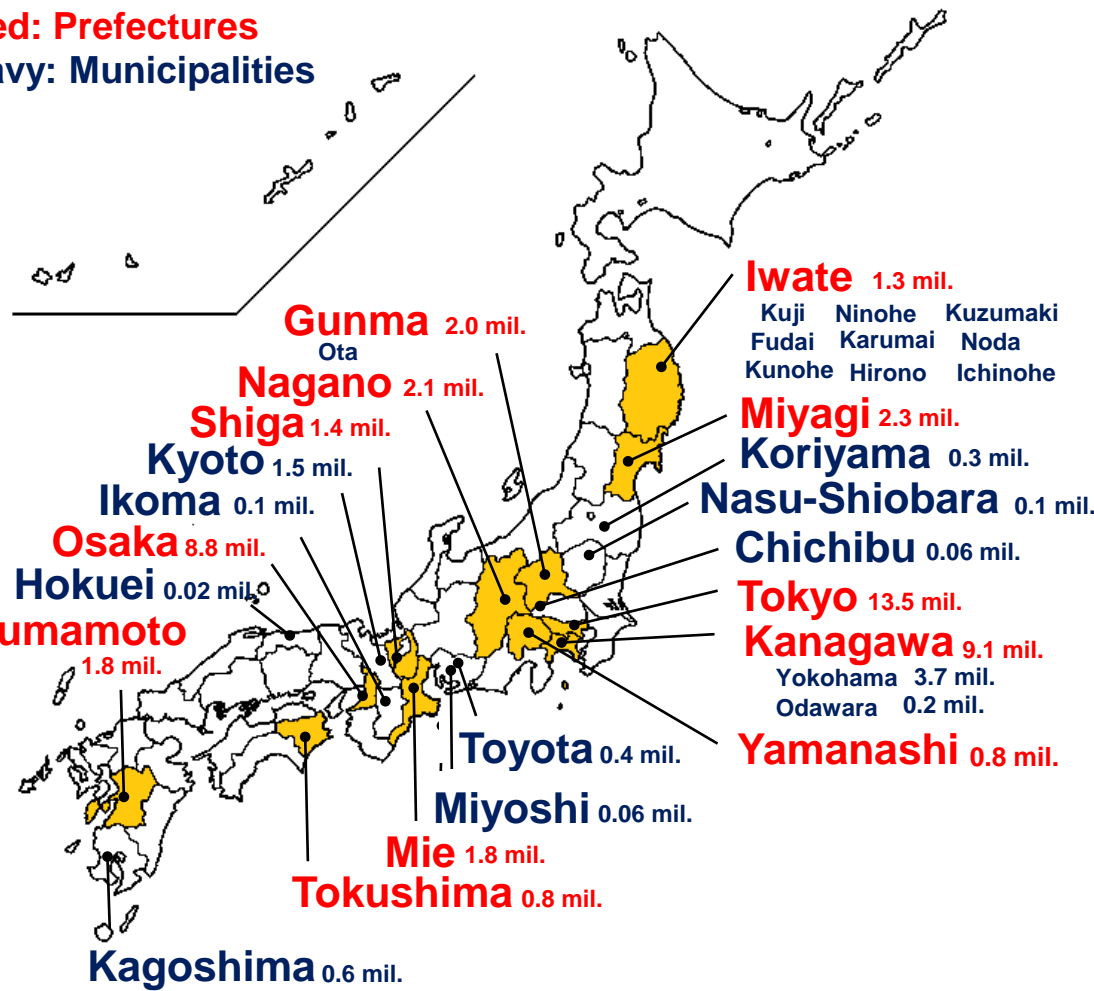
2050 Zero Carbon Cities in Japan

- 33 local governments including Tokyo, Kyoto, and Yokohama announced to aim at net zero carbon emissions by 2050.
- These local governments represent **49 million people (39% of Japan's population)**, and **2.5 trillion USD in GDP**.

(Population of Spain is 47 million)

As of 7 Jan. 2020

Red: Prefectures
Navy: Municipalities



City to City Collaboration Program



Outline of city-to-city collaboration program

- Basic concept is transferring the **knowledge and experience of Japanese cities for creating low carbon society** to foreign cities which have the mutual relationship.
- Private companies formulate the consortiums with Japanese cities and support foreign cities to create low carbon cities.

Ex) Support to design city masterplan and install low carbon technology etc.



- **Creating low carbon project** efficiently and effectively
- Designing **the local systems** to promote low carbon society
Ex) low carbon action plan and technology evaluation criteria etc.
- **Capacity building** for local staffs

Promotion of private investment

Self-sustained development of foreign city

Transferring low-carbon technology to other fields



Cities joining the city to city collaboration program FY 2013 - 2019

Lao PDR

Foreign city	Japanese city
Vieng chan	Kyoto

Myanmar

Foreign city	Japanese city
Yangon(region)	Kitakyushu
Yangon(city)	Kawasaki
Ayeyarwady	Fukushima
Sagaing	Fukushima
Mandalay	Kitakyushu

India

Foreign city	Japanese city
Bangalore	Yokohama

Thailand

Foreign city	Japanese city
Bangkok	Yokohama
Rayong	Kitakyushu
Chiang mai	Kitakyushu
Eastern Thailand(EEC)	Osaka

Cambodia

Foreign city	Japanese city
Phnom penh	Kitakyushu
Siem reap	Kanagawa pref.

Mongolia

Foreign city	Japanese city
Ulaanbaatar	Sapporo Hokkaido pref.

10 countries and 32 cities
and area
from Asia

14 municipalities from Japan

17 collaborations in 2019FY

Malaysia

Foreign city	Japanese city
Iskandar	Kitakyushu
Penang	Kawasaki
Kuala Lumpur	Tokyo Metropolitan Government

Vietnam

Foreign city	Japanese city
Hai phong	Kitakyushu
Da nang	Yokohama
Ho chi minh	Osaka
Kiên Giang	Kobe
Can Tho	Hiroshima pref.

Philippines

Foreign city	Japanese city
Quezon	Osaka
Davao	Kitakyushu

Indonesia

Foreign city	Japanese city
Denpasar	Tokyo union
Surabaya	Kitakyushu
Batam	Yokohama
Semarang	Toyama
Bandung	Kawasaki
Jakarta	Kawasaki
Bali	Toyama
Rokan Hulu	Kawasaki

※New entry cities from FY2019



17 collaborations in 2019FY

1. Ho Chi Minh City (Vietnam) – Osaka City
2. Bali City (Indonesia) – Toyama City
3. Hlegu township, Yangon (Myanmar) – Kitakyushu City
4. Iskandar Development Area (Malaysia) – Kitakyushu City
5. Bangkok and Laem Chabang (Thailand) – Yokohama City
6. Yangon City (Myanmar) – Kawasaki City
7. Can Tho city (Vietnam) – Hiroshima pref. government
8. Sagaing Region (Myanmar) – Fukushima City
9. Rokan Hulu Regency (Indonesia) – Kawasaki City
10. Kuala Lumpur City (Malaysia) – Tokyo Metropolitan Government
11. Davao City (the Philippines) – Kitakyushu City
12. Quezon City (the Philippines) – Osaka City
13. Hai Phong City (Vietnam) – Kitakyushu City
14. Eastern Economic Corridor (EEC) and Bangkok (Thailand) – City of Osaka
15. Jakarta (Indonesia) – Kawasaki City
16. Ayeyarwady Region (Myanmar) – Fukushima City
17. Semarang City (Indonesia) – Toyama City

Joint Crediting Mechanism(JCM)

Climate Change Diplomacy by Minister Koizumi (UNFCCC Negotiation)

- ◆ Actively publicized Japan's position through the UNFCCC negotiation process, national statement and plenary session
- ◆ Supported COP25 Chile Chairman for agreement, including being entrusted with facilitating the Ministerial-level meeting on Article 6 of the Paris Agreement
- ◆ Demonstrated Japan's new climate change diplomacy, including coordinating views with Cabinet Ministers

Date	Minister's attendance event and summary of remarks
12/11 Wed	<p>1)Public Statement</p> <p>Highlighted Japan's contributions, including Japan's GHG emissions reduction for five consecutive years, increasing the number of local governments that declare net zero, committing to Japan's de-carbonization, and contributing to the Green Climate Fund (GCF)</p>
12/13 Fri	<p>2)Chair Stocktaking Plenary</p> <p>Made a positive remark that discussions should proceed based on the first edition of the Chair's text</p>
12/14 Sat	<p>3)Facilitating the Ministerial meeting of Paris Agreement Article 6</p> <p>Major countries relating to Article 6 (China, Brazil, India, Saudi Arabia, Egypt, EU, Switzerland, Japan) participated. Minister facilitated to coordinate discussions.</p>
12/15 Sun	<p>4)Adjustments in Informal Stocktaking</p> <p>5)Remark at Closing Plenary</p> <p>Actively coordinate views with the Chair and ministerial stakeholders</p>



1)Statement (Reuters)



2)Chair Stocktaking Plenary (IISD/ENB)



Venue for Chair Stocktaking Plenary(IISD/ENB)



3)Ministerial meeting of Paris Agreement Article 6 (MOEJ)



4)Informal Stock Taking (IISD/ENB)
Left:Ms. Teresa Ribera, Minister of Ecological Transition (Spain) Center: Ms. Carolina Schmidt Zaldivar(Chile)



5)Discussion with Ms. Carolina Schmidt Zaldivar(Chile) in Closing (Reuters)



5)Discussion with Mr. Ricardo de Aquino Salles(Brazil) in Closing (Reuters)



Discussion with Ms. Patricia Espinosa(UNFCCC) (IISD/ENB)

Climate Change Diplomacy by Minister Koizumi (bilateral meetings)

◆ Held more than **30 bilateral meetings** with major countries and UN organizations to work toward agreement under Article 6 of the Paris Agreement

Date **Bilateral meetings**

11:45 1st version of the Chair's text

16:00-01:55 **13** bilateral meetings held

Chile (1st,2nd)

Brazil (1st,2nd,3rd)

EU (1st,2nd,3rd)

UN Mr. António Guterres, Secretary-General (1st,2nd)

And Germany, New Zealand/South Africa, United States of America

12/13
Fri



Mr. António Guterres,(UN)

Ms. Patricia Espinosa (UNFCCC)

9:15 2nd version of the Chair's text

08:25-22:50 bilateral meetings

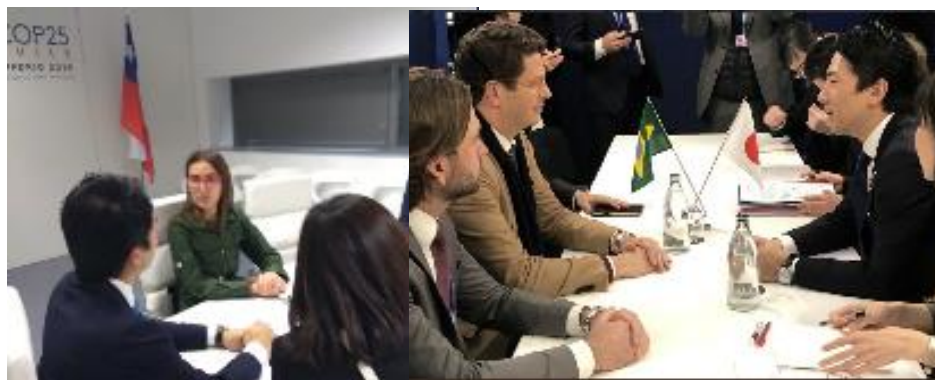
Chile (3rd)

Brazil (4th,5th,6th)

EU (4th)

And China, Singapore, Saudi Arabia, African Group(Egypt, Senegal)

12/14
Sat



Ms. Carolina Schmidt Zaldivar (Chile)

Bilateral meeting with (Brazil)

18:15 Ministerial meeting of Paris Agreement Article 6

Chile (4th,5th)

EU (5th)

UNFCCC Ms. Patricia Espinosa, Executive Secretary (1st,2nd)

12/15
Sun

00:20-1:10 Final Chair's text issued

02:00 Informal Stocktaking

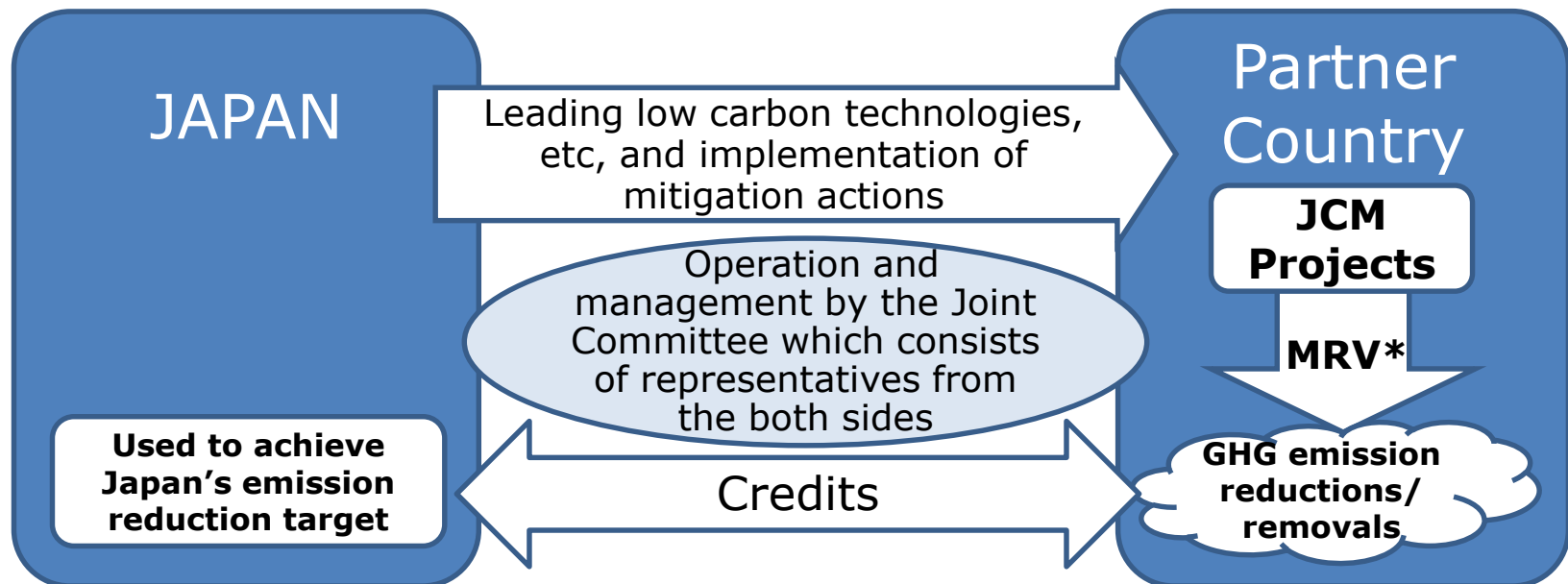


Ms. Barbara Creecy, Minister of Environment, Forestry and Fisheries(South Africa)

Mr. Masagos Zulkifli Bin Masagos Mohamad, Minister for the Environment and Water Resources(Singapore)

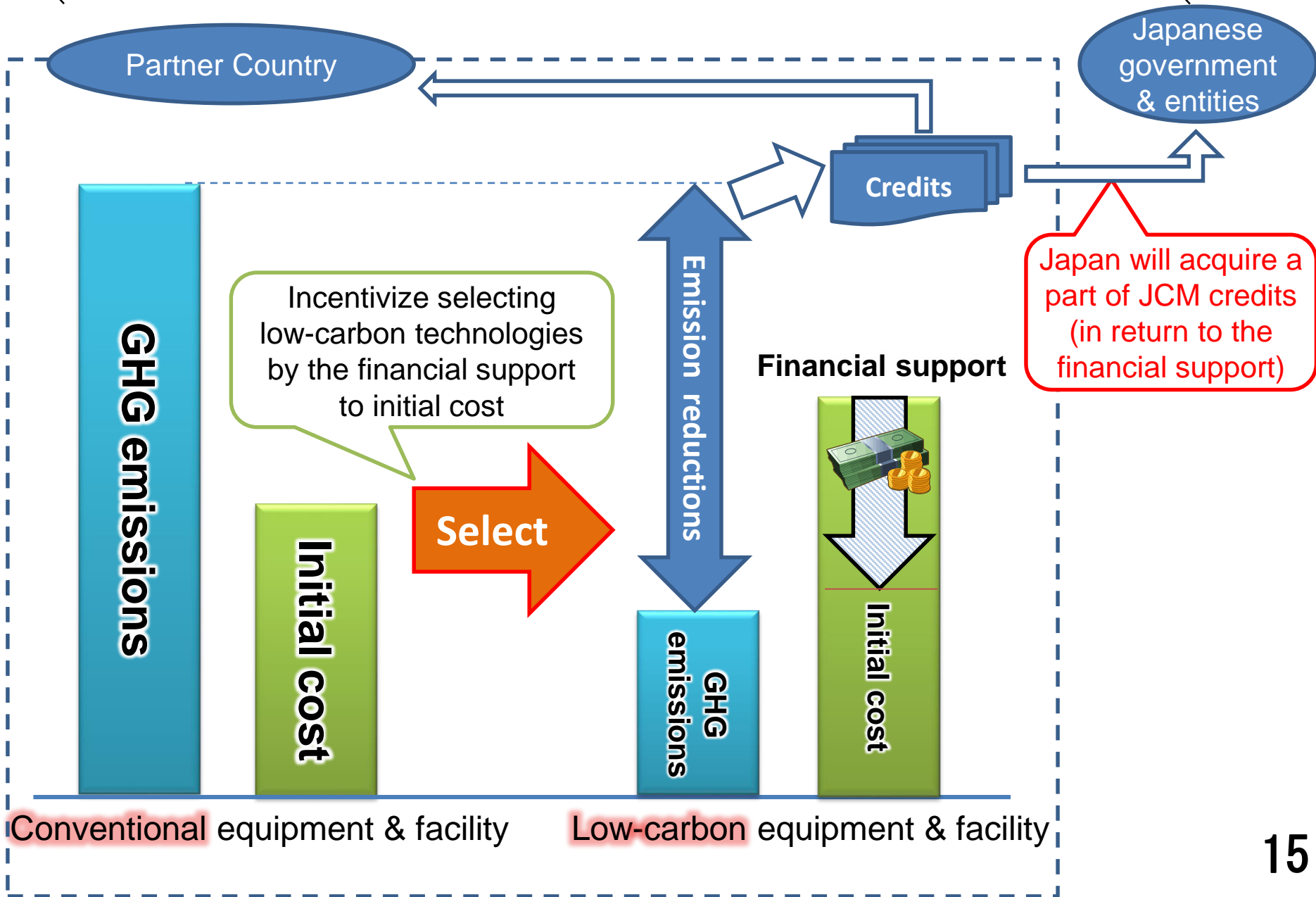
Basic Concept of the JCM

- 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.



*measurement, reporting and verification

Contributions from Japan

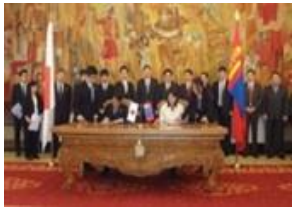


JCM Partner Countries



Ministry of the Environment
Government of Japan

- Japan has held consultations for the JCM with developing countries since 2011 and has established the JCM with 17 countries.



Mongolia
Jan. 8, 2013
(Ulaanbaatar)



Bangladesh
Mar. 19, 2013
(Dhaka)



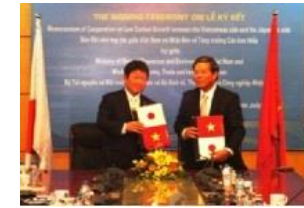
Ethiopia
May 27, 2013
(Addis Ababa)



Kenya
Jun. 12, 2013
(Nairobi)



Maldives
Jun. 29, 2013
(Okinawa)



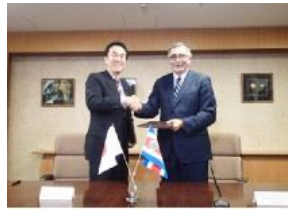
Viet Nam
Jul. 2, 2013
(Hanoi)



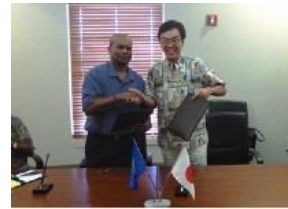
Lao PDR
Aug. 7, 2013
(Vientiane)



Indonesia
Aug. 26, 2013
(Jakarta)



Costa Rica
Dec. 9, 2013
(Tokyo)



Palau
Jan. 13, 2014
(Ngerulmud)



Cambodia
Apr. 11, 2014
(Phnom Penh)



Mexico
Jul. 25, 2014
(Mexico City)



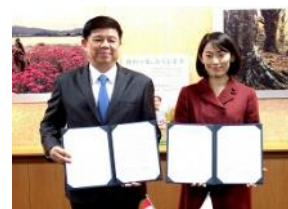
Saudi Arabia
May 13, 2015



Chile
May 26, 2015
(Santiago)



Myanmar
Sep. 16, 2015
(Nay Pyi Taw)



Thailand
Nov. 19, 2015
(Tokyo)



the Philippines
Jan. 12, 2017
(Manila)

Budget for projects starting from FY 2019 is **9.9 billion JPY** (approx. **USD 99 million**) in total by FY2021

(1 USD = 100 JPY)

Finance part of an investment cost (**less than half**)

Government of Japan

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

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 CO₂ 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.

The Joint Crediting Mechanism (JCM)



Ministry of the Environment
Government of Japan



Waste heat recovery in Cement Industry, JFE engineering, Indonesia



Eco-driving with Digital Tachographs, NITTSU, Vietnam



Energy saving at convenience stores, Panasonic, Indonesia



High efficiency air-conditioning and process cooling, Ebara refrigeration equipment & systems, Indonesia



High-efficiency Heat only Boilers, Suuri-Keikaku, Mongolia



Upgrading air-saving loom at textile factory, TORAY etc., Indonesia, Thai, Bangladesh



Installing solar PV system, PCKK, Palau Maldives



Amorphous transformers in power distribution, Hitachi Materials, Vietnam



Co-generation system at factory, Toyota, Nippon Steel & Sumikin Engineering, Indonesia, Thai



High efficiency air-conditioning system, Hitachi, Daikin, Vietnam



Solar power ,Farmdo Co., Ltd.,Mongolia



Waste to Energy Plant, JFE engineering, Myanmar



High efficient refrigerator, Mayekawa MFG, Indonesia



Regenerative Burners in industries, Toyotsu Machinery Indonesia



LED street lighting system with wireless network control, MinebeaMitsumi, Cambodia

JCM Financing Programme by MOEJ (FY2013~2019) as of Nov 26, 2019



Ministry of the Environment
Government of Japan

Total 153 projects (● Model Project: 144 projects, ■ ADB: 5 projects, ◆ REDD+: 2 projects, ▲ F-gas: 2 projects) Other 1 project in Malaysia
94 underlined projects have been started operation. **48 projects with *** have been registered as JCM projects.

Cambodia: 5 projects

- LED Street Lighting
- 200kW Solar PV at International School*
- Solar PV & Centrifugal Chiller
- Inverters for Distribution Pumps
- Battambang Wastewater Treatment Project

Myanmar: 7 projects

- 700kW Waste to Energy Plant
- Brewing Systems to Brewery Factory
- Once-through Boiler in Instant Noodle Factory
- 1.8MW Rice Husk Power Generation
- Refrigeration System in Logistics Center
- 8.8MW Waste Heat Recovery in Cement Plant
- Brewing Systems and Biogas Boiler to Brewery Factory

Bangladesh: 6 projects

- Centrifugal Chiller
- Loom at Weaving Factory*
- 315kW PV-diesel Hybrid System*
- 50MW Solar PV Power Plant
- Centrifugal Chiller*
- High Efficiency Transmission Line

Saudi Arabia: 1 project

- Electrolyzer in Chlorine Production Plant

Maldives: 3 projects

- 186kW Solar Power on School Rooftop*
- Smart Micro-Grid System
- 1.1MW Rooftop Solar PV

Kenya: 2 projects

- 1MW Solar PV at Salt Factory
- 38MW Solar PV

Laos: 4 projects

- ◆ REDD+ through controlling slush-and-burn
- Amorphous transformers
- 14MW Floating Solar PV
- 11MW Solar PV

Thailand: 31 projects

- Energy Saving at Convenience Store
- Upgrading Air-saving Loom*
- Centrifugal Chiller in Tire Factory
- Air Conditioning System & Chiller*
- Ion Exchange Membrane Electrolyzer
- LED Lighting to Sales Stores
- 2MW Solar
- Co-generation System PV
- Heat Recovery Heat Pump
- Boiler System in Rubber Belt Plant
- Biomass Co-generation System
- Co-generation in Fiber Factory
- 3.4MW Solar PV
- 0.8MW Solar PV and Centrifugal Chiller
- Heat Exchanger in Fiber Factory
- 1MW Solar PV on Factory Rooftop*
- Centrifugal Chiller & Compressor*
- Co-generation in Motorcycle Factory
- Refrigeration System
- Chilled Water Supply System
- 12MW Waste Heat Recovery in Cement Plant
- Refrigerator and Evaporator
- 5MW Floating Solar PV
- Air-conditioning Control System
- Energy Saving Equipment in Port
- Biomass Boiler
- 25MW Solar PV in Industrial Park
- Introduction of Scheme for F-gas Recovery and Destruction
- 37MW Solar PV and Melting Furnace

Mongolia: 10 projects

- Heat Only Boiler (HOB)**
- 2.1MW Solar PV in Farm*
- 10MW Solar PV*
- 8.3MW Solar PV in Farm
- 15MW Solar PV
- 20MW Solar PV
- 21MW Solar PV
- Upscaling Renewable Energy Sector
- Fuel Conversion by Introduction of LPG Boilers
- Improving Access to Health Services

Viet Nam: 23 projects

- Digital Tachographs*
- Amorphous transformers 1*
- Air-conditioning in Hotel*
- Electricity Kiln
- Air-conditioning in Lens Factory*
- Container Formation Facility*
- Amorphous transformers 2*
- 320kW Solar PV in Shopping Mall*
- Air-conditioning Control System
- High Efficiency Water Pumps 1*
- Energy saving Equipment in Lens Factory*
- Amorphous transformers 3*
- Energy Saving Equipment in Wire Production Factory*
- Amorphous transformers 4
- Energy Saving Equipment in Brewery Factory
- High Efficiency Chiller
- Modal Shift with Reefer Container
- Inverters for Raw Water Intake Pumps
- ▲ Collection Scheme and Dedicated System of F-gas
- Waste to Energy Plant
- High Efficiency Water Pumps 2
- Biomass Boiler to Chemical Factory
- Air-Conditioning System and Air Cooled Chillers

Mexico: 7 projects

- 2.4MW Power Generation with Methane Gas Recovery System
- Once-through Boiler and Fuel Switching
- 64MW Wind Farm
- 20MW Solar PV
- 30MW Solar PV1
- Energy Efficient Distillation System
- 30MW Solar PV2

Philippines: 11 projects

- 15MW Hydro Power Plant
- 4MW Hydro Power Plant
- 1.53MW Rooftop Solar PV
- 1MW Rooftop Solar PV
- 1.2MW Rooftop Solar PV
- 4MW Solar PV
- 2.5MW Rice Husk Power Generation
- 0.16MW Micro Hydro Power Plant
- 18MW Solar PV
- 19MW Hydro Power Plant
- Biogas Power Generation and Fuel Conversion

Palau: 5 projects

- 370kW Solar PV for Commercial Facilities*
- 155kW Solar PV for School*
- 445kW Solar PV for Commercial Facilities II*
- 0.4MW Solar PV for Supermarket
- 1MW Solar PV for Supermarket

Indonesia: 33 projects

- Centrifugal Chiller at Textile Factory*
- Refrigerants to Cold Chain Industry**
- Centrifugal Chiller at Textile Factory 2*
- 507kW Solar Power Hybrid System
- Centrifugal Chiller at Textile Factory 3*
- Upgrading to Air-saving Loom*
- Smart LED Street Lighting System
- Gas Co-generation System*
- 1.6MW Solar PV in Jakabaring Sport City*
- 10MW Hydro Power Plant
- Industrial Wastewater Treatment System
- Gas Co-generation system
- High Efficiency Autoclave
- Rehabilitation of Hydro Power Plant
- 2MW Mini Hydro Power Plant
- Looms in Weaving Mill*
- 0.5MW Solar PV*
- Absorption Chiller
- CNG-Diesel Hybrid Public Bus
- 12MW Biomass Power Plant
- Boiler to Carton Box Factory
- Energy Saving at Convenience Store*
- Double Bundle-type Heat Pump*
- 30MW Waste Heat Recovery in Cement Industry*
- Regenerative Burners
- Old Corrugated Cartons Process*
- Centrifugal Chiller in Shopping Mall*
- Once-through Boiler System in Film Factory*
- Once-through Boiler in Golf Ball Factory*
- ◆ REDD+ through controlling slush-and-burn
- LED Lighting to Sales Stores
- 10MW Hydro Power Plant
- 10MW Hydro Power Plant
- Injection Molding Machine3

Costa Rica: 2 projects

- 5MW Solar PV
- Chiller and Heat Recovery System

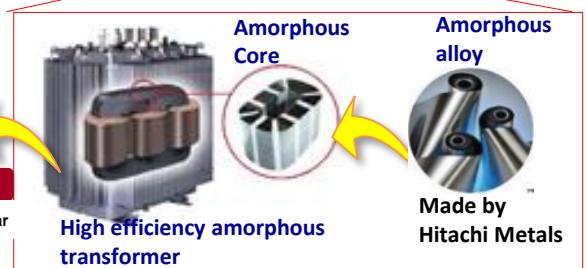
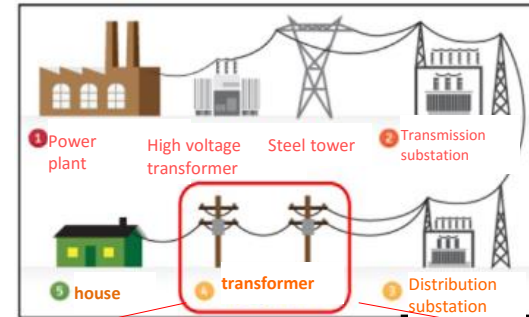
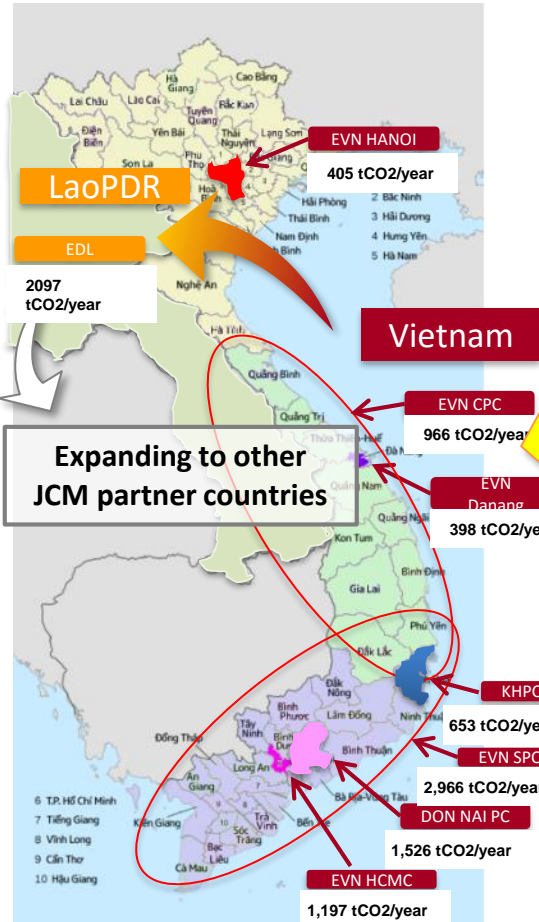
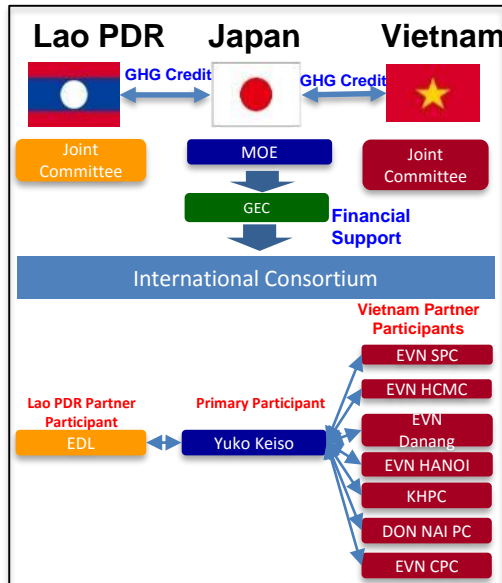
Chile: 3 projects

- 1MW Rooftop Solar PV*
- 1.4MW Solar PV and 2.3MWh Storage Battery
- 3.4MW Rice Husk Power Generation

Examples of successful activities

High efficiency amorphous transformers from Vietnam to Lao PDR

- ★ Transformers in Vietnam are being replaced with amorphous high efficiency transformers from 2015 through 2020.
- ★ Succeeded in developing the same product and technology in Lao PDR since 2018. Preparing for expansion to other countries.
- ★ Providing excellent amorphous alloy low carbon technology. A total of 10,000 transformers introduced throughout Vietnam.



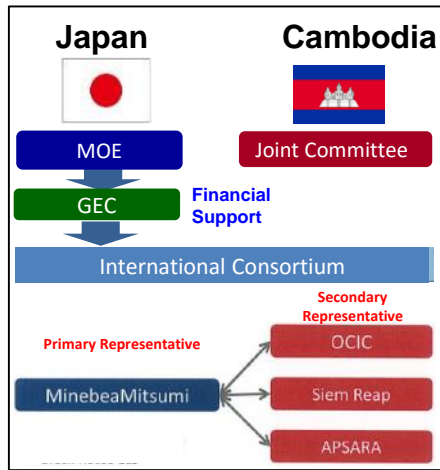
Amount of amorphous transformer introduced (as of JAN2019)

ベトナム	FY2015	FY2016	FY2017	FY2018	Total
EVN SPC	1,618	2,686	2,507		6,811
EVN HCMC		552	340		892
EVN CPC		981			981
EVN Danang		282			282
EVN HANOI		121	65		186
KHPC		111	305	30	446
DON NAI PC		168	580	207	955
Total	1,618	4,901	3,797	237	10,553
ラオス	FY2015	FY2016	FY2017	FY2018	Total
EDL				465	465

JCM Expansion Example②

Expansion into smart city environment from LED street light network in Cambodia

- ★70% energy saving is achieved by LED street light in emerging city and world heritage .
- ★Commenced joint study with local partners to build smart city environment by wireless network environment deployment.
- ★LED street light of 5,600 installed in Cambodia such as Phnom Penh and Angkor Wat (total installation area is 120km² in total).



APSARA(Angkor Wat)



OCIC Chroy Changvar (Phnom penh)



Siem Reap

APSARA Site

Siem Reap Site



OCIC Site: Chroy Changvar

OCIC Site: Diamond Island

Consortium	No. of Introduction
APSARA	1,670
Siem Reap	1,948

Consortium	No. of Introduction
OCIC	2,054

Actual number installed in Cambodia

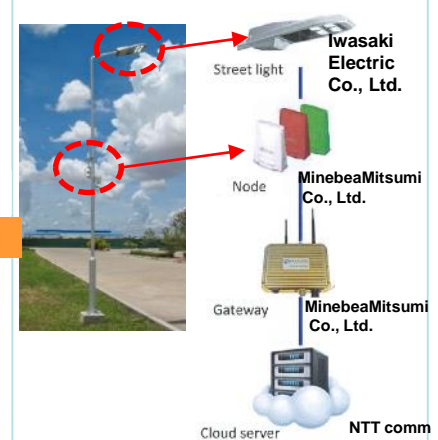


Siem Reap Provincial Hall (SRPH)



OCIC Diamond Island

LED street light management system



70% energy saving achieved

Deploying various IOT sensors and wireless networking environments will enable the Smart City environmental infrastructure.



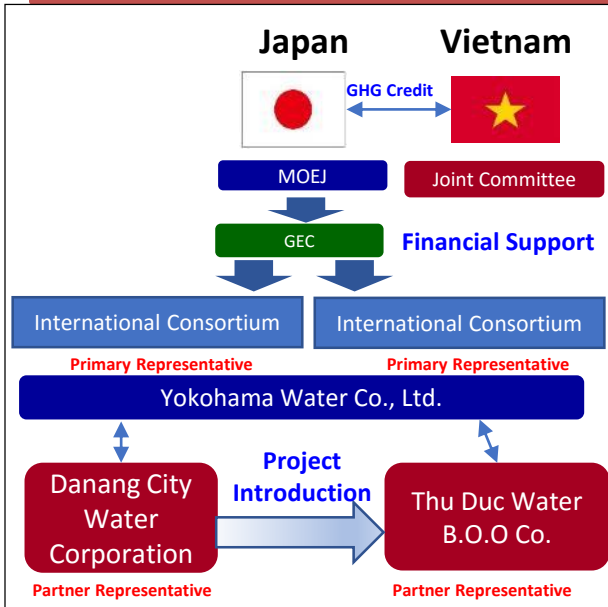
The total footprint of the LED street light is 1.5 times that of Manhattan Island (120km²)

December 2016
Received Minister of the Environment Award in Cambodia

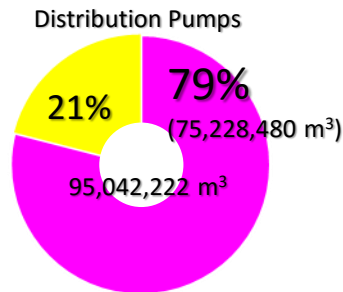
Basic infrastructure of water business in Vietnam

- ★ Yokohama City and Da Nang City signed a Memorandum of Understanding on Technical Cooperation for Sustainable Urban Development.
- ★ Representative participant utilized JCM Model Project to introduce high efficiency pumps to Danang Water Supply Joint Stock Company. Monitoring is being conducted.
- ★ Based on the achievement in Danang project, JCM Model Project is expanding to other cities in Vietnam, such as Ho Chi Minh and Hue.

Introduction of high efficiency pumps and inverters in Vietnam (Representative Participant: Yokohama Water Co., Ltd.)



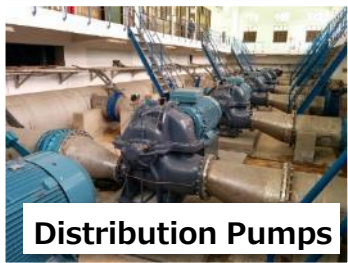
Pumps installed through the JCM project process major part of Danang water demand.



Total Water Processed in 2018 for Danang City

- Pumps installed through the JCM project
- Other pumps

High efficiency pumps(Da Nang City Water Corporation)



[Danang City Water Corporation]
Explained the effectiveness of JCM Model Project and high efficiency pump at the ceremony

[Ho Chi Minh City Water Treatment Plant]
Using the ceremony as an opportunity, JCM Model Project was utilized implementation of inverter of water intake pump (project ongoing)

Danang City Water Corporation

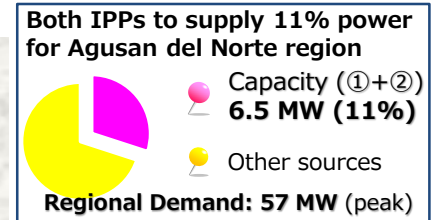
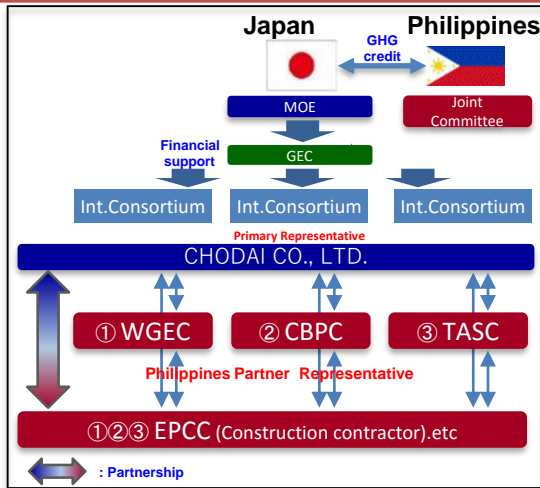
Thu Duc Water B.O.O Co. (Ho Chi Minh City Water Purification Plant)

6 TP. Hồ Chí Minh
7 Tỉnh Giang
8 Vĩnh Long
9 Cần Thơ
10 Hậu Giang

Basic Infrastructure of Regional Development in the Philippines

- ★ The representative participant aims to realize a stable supply of basic infrastructure by participating in and investing in power generation and water supply against the unstable infrastructure of Butuan City.
- ★ Small/micro hydropower generation and biomass power generation are implementing by three JCM Model Projects.
- ★ Partnering with local leading partners, developing three projects. Supply one third of peak demand in Northern Agusan.

Taguibo River Small Hydroelectric Power Project / Taguibo River Water Treatment Plant Micro Hydro Power Project / Butuan City Rhinoceros Power Generation Project (Representative Participant: CHODAI CO.,LTD.)



Partnering with local leading partners
Utilizing JCM Model Projects with consulting,
construction and O & M, develop renewable energy
business as basic infrastructure of regional development

2019 JCM Model Project (Implementing)
② Butuan City 2.5 MW rice husk power generation PJT

Rice husk biomass IPP

Stable Supply of Rice Husks

Low carbon type Industrial park Dev. PJT (Not covered by JCM)



2017 JCM Model PJT (Implementing)
① Taguibo 4MW small hydropower generation PJT

Small hydro IPP

Overview: Water turbine generator, Conduit, Intake dam, IPP

2019 JCM Model PJT (Implementing)
③ Taguibo River WTP Micro hydro power generation PJT

Micro hydraulic generator (Captive)

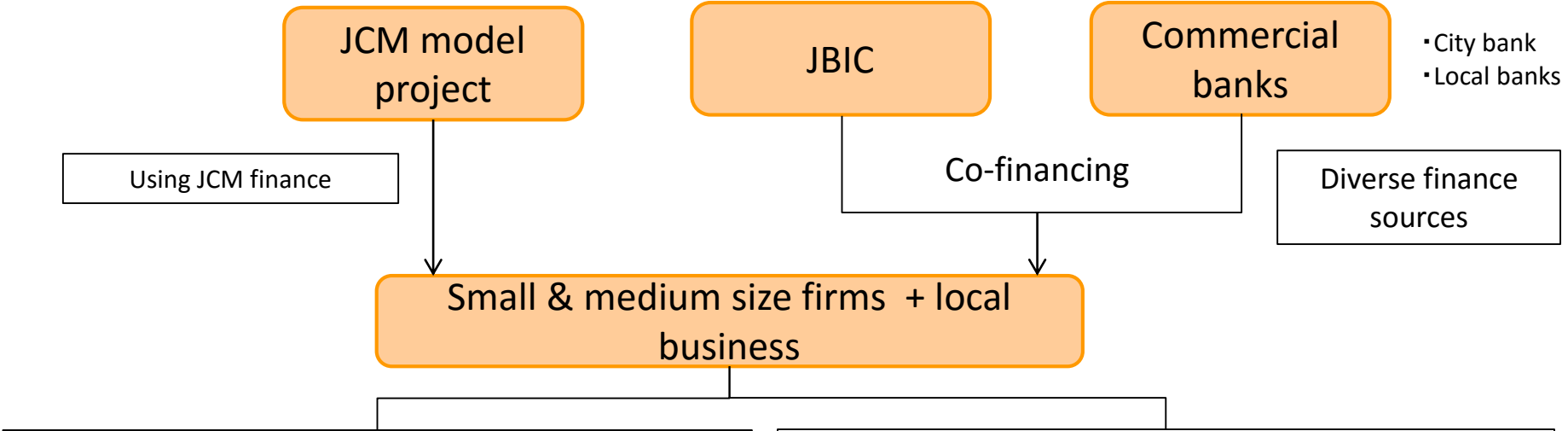
Water purification plant (30,000tons / day) as part of the In-house power Usage (0.16 MW)

intake dam

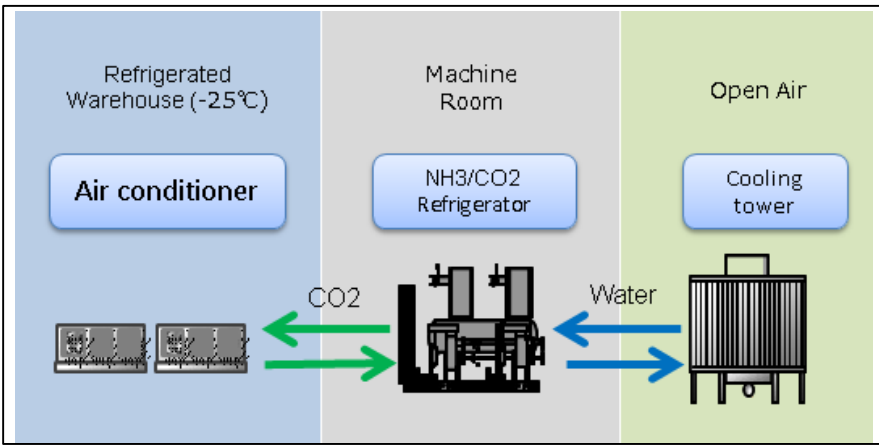
Water supply PJT (Not covered by JCM)

Facilitating overseas business development utilizing support and co-financing

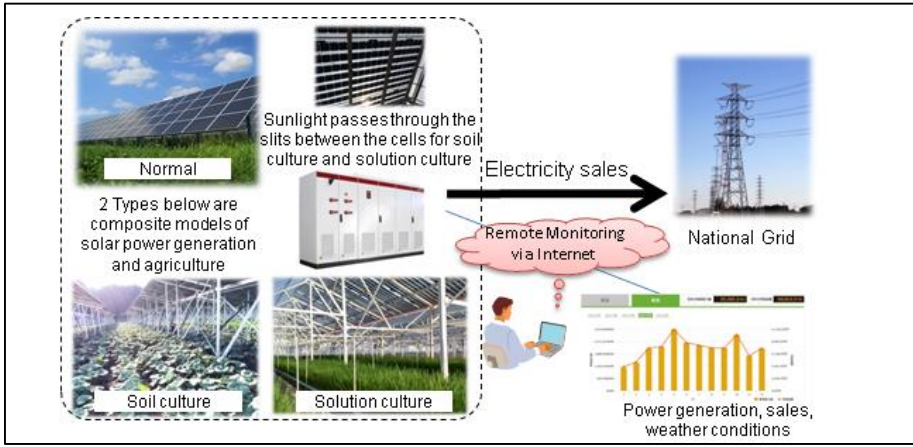
- JCM financing programme supported small & medium size firms for overseas business development
- The project used several financing sources such as JBIC and private banks in addition to the JCM



Introduction of Energy Efficient Refrigeration System in Logistics Center in Myanmar



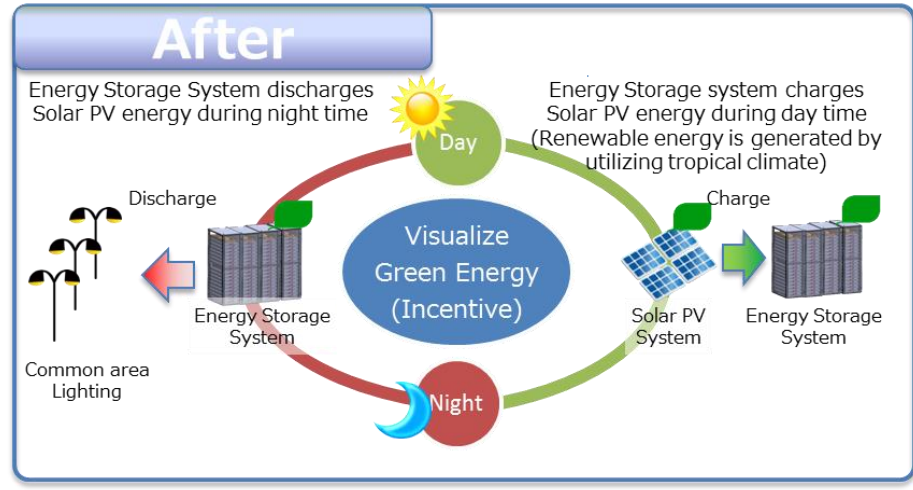
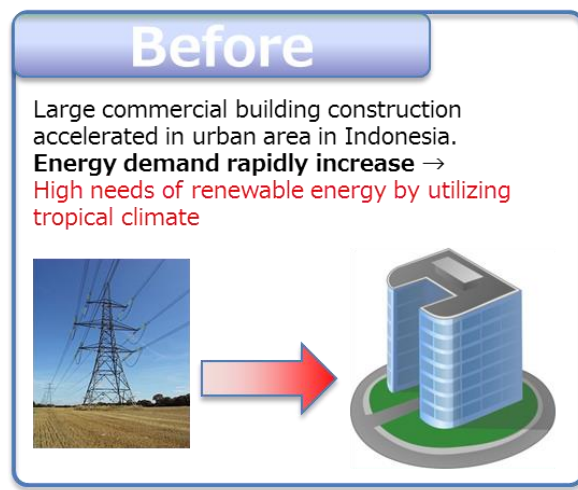
Installation of 2.1MW Solar Power Plant for Power Supply in Ulaanbaatar Suburb in Mongolia



Installation of Solar Power System and Storage Battery to Commercial Facility
 PP (Japan): Itochu Corporation, PP (Indonesia): PT. Aeon Mall Indonesia

Collaboration Project with JOIN
 (Japan Overseas Infrastructure Investment Corporation for Transportation & Urban Development)

Outline of GHG Mitigation Activity



This project installs solar power system and storage battery to commercial facility because Indonesia has a demand for the electricity with economic growth. The electricity from solar power system is supplied to lighting equipment. In a daytime, surplus power is charged to storage battery, and it is used during the night. The project achieves GHG mitigation by reducing a purchase of the electricity from the electric company.

Expected GHG Emission Reductions

549tCO₂/year

← (PV generation + (Storage Battery discharged energy - Storage Battery charged energy)) × Emission Factor

Sites of JCM Model Project

The site is located at Aeon Mall Jakarta Garden City in eastern Jakarta.



The way forward

Long Term Strategies

- Sharing the LTS in Japan and support developing LTS in other countries

Zero carbon Cities

- Promote Zero carbon cities in the world through city to city cooperation

JCM

- Create City Scale JCM projects to realize Zero Carbon Cities



Plastics
Smart

Thank you for your attention