



Ministry of the Environment



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## Recent development of the JCM (Joint Crediting Mechanism)

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Seminar on the Joint Crediting Mechanism (JCM) Implementation in Philippines

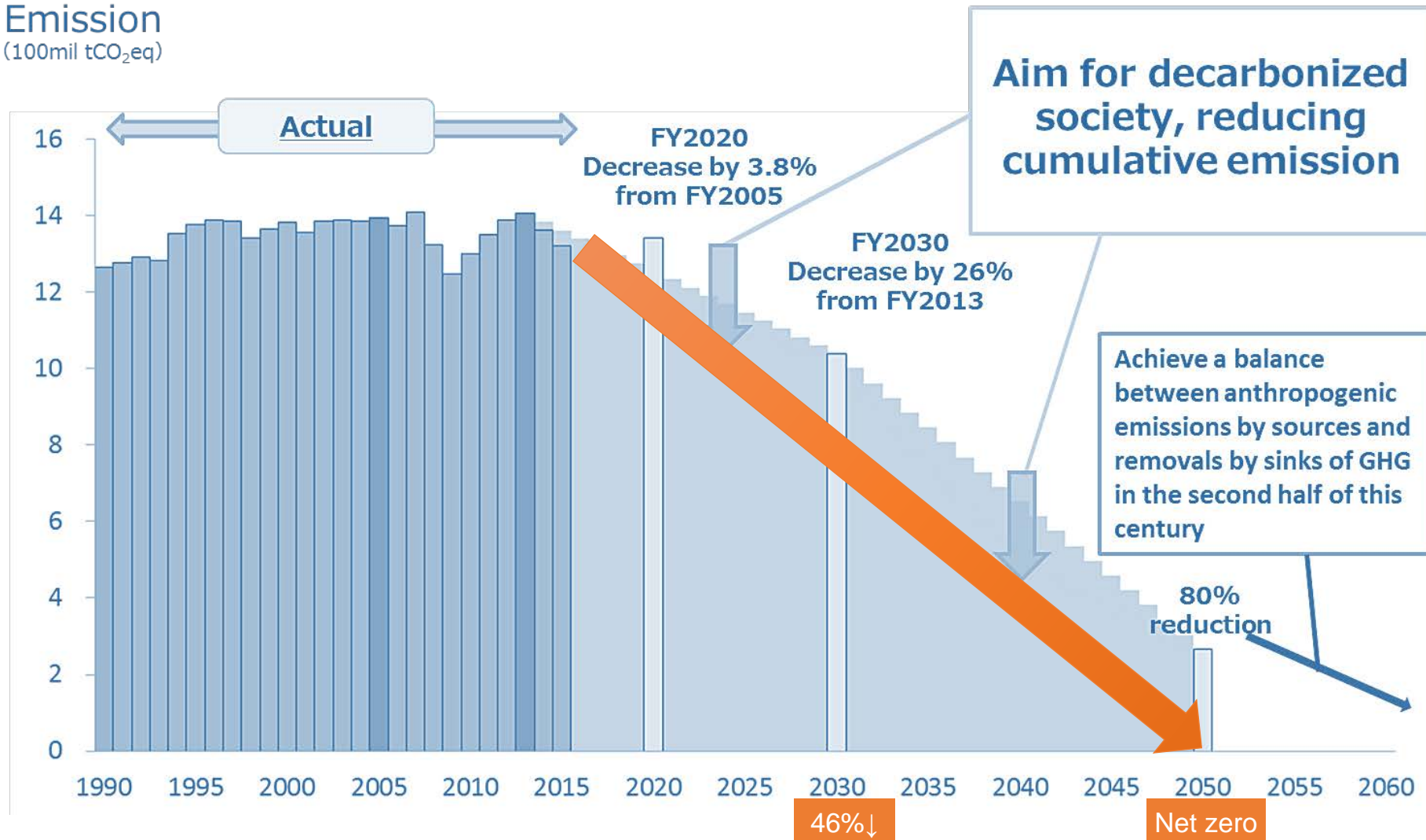
March 3, 2022

Ministry of the Environment, Japan

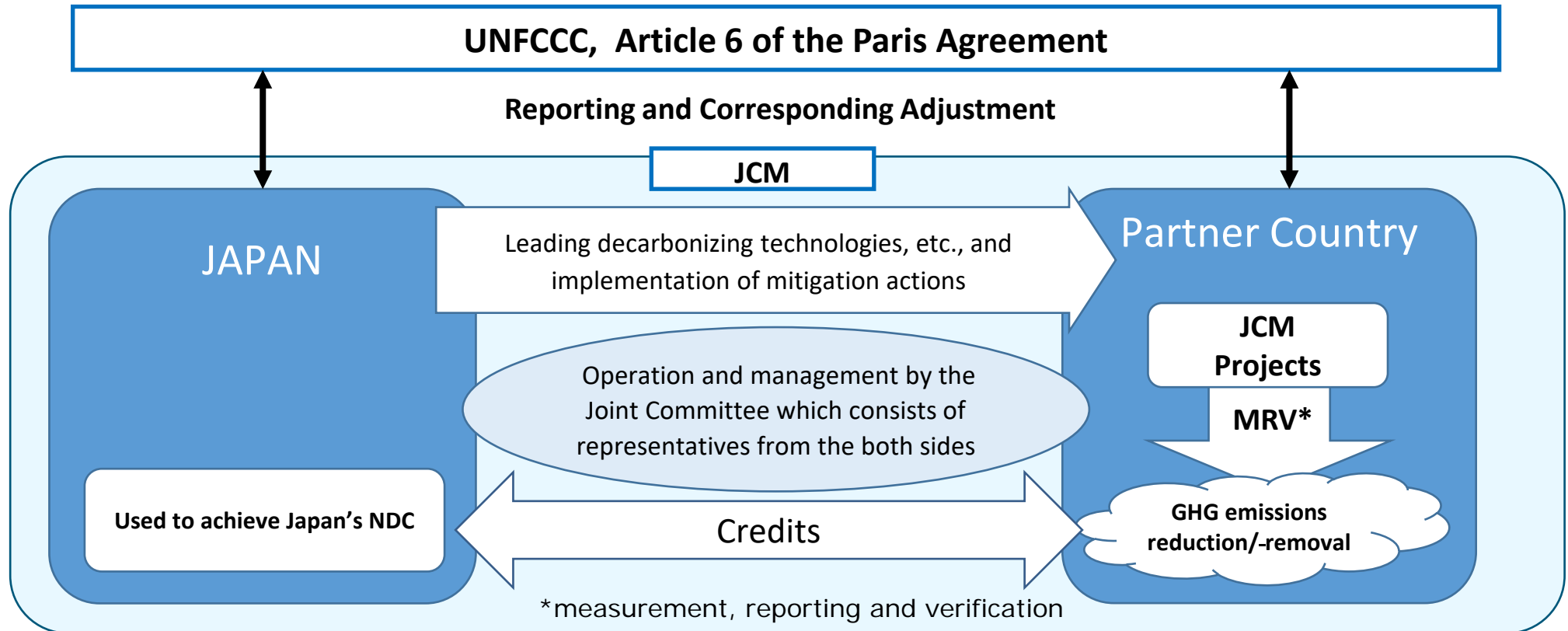


- ❑ **Long-term goal: Net zero emissions by 2050** compared to 2013
- ❑ **Mid-term target: 46% emission reduction by 2030** compared to 2013
- ❑ GHG emissions in 2020: 1,149 mil ton of CO<sub>2</sub> eq. (5.0% reduction to 2019, 18.4% reduction to 2013)
- ❑ **JCM target: cumulative GHG emission reduction for 100 mil tons** of CO<sub>2</sub> eq. by 2030

Emission  
(100mil tCO<sub>2</sub>eq)



# Basic concept of the JCM and contribution to carbon neutrality

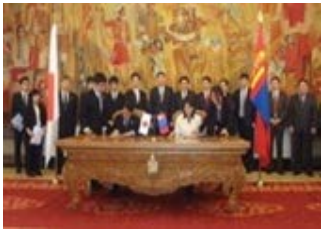


## Cooperation towards achieving carbon neutrality

With the successful conclusion of the Rulebook for Article 6 of the Paris Agreement at COP26, carbon markets will further expand. The JCM, as a pioneering mechanism under the Article 6, will benefit not only for GHG emission reductions, but also for the sustainable development of the partner countries.

# 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 the Philippines.



Mongolia  
Jan. 8, 2013



Bangladesh  
Mar. 19, 2013  
(Dhaka)



Ethiopia  
May 27, 2013  
(Addis Ababa)



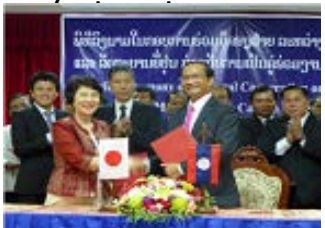
Kenya  
Jun. 12, 2013  
(Nairobi)



Maldives  
Jun. 29, 2013  
(Okinawa)



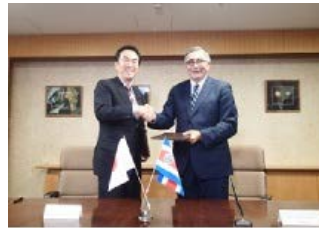
Viet Nam  
Jul. 2, 2013  
Oct.14, 2021 (Hanoi)



Lao PDR  
Aug. 7, 2013  
(Vientiane)



Indonesia  
Aug. 26, 2013  
(Jakarta)



Costa Rica  
Dec. 9, 2013  
(Tokyo)



Palau  
Jan. 13, 2014  
(Ngerulmud)



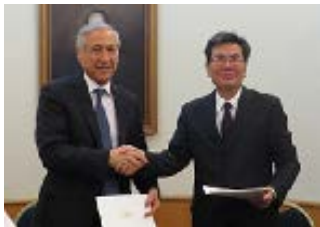
Cambodia  
Apr. 11, 2014  
(Phnom Penh)



Mexico  
Jul. 25, 2014  
(Mexico City)



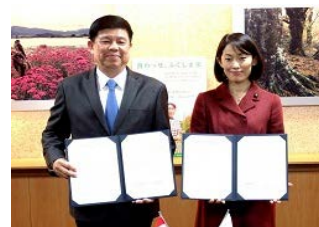
Saudi Arabia  
May 13, 2015



Chile  
May 26, 2015  
(Santiago)



Myanmar  
Sep. 16, 2015  
(Nay Pyi Taw)



Thailand  
Nov. 19, 2015  
(Tokyo)



Philippines  
Jan. 12, 2017  
(Manila)

|                                 | JCM Model Projects<br>(including ECO Lease<br>scheme)  | ADB Trust Fund:<br>Japan Fund for JCM<br>(JFJCM)  | JCM F-gas Recovery and<br>Destruction Model<br>Project   |
|---------------------------------|--|---|--|
| Overview                        | Support projects which reduce GHG emissions by utilizing leading decarbonizing technologies in developing countries.   | Provide the financial incentives for the adoption of advanced low-carbon technologies which are superior in GHG emission reduction but expensive in ADB-financed projects | Support projects that recover and destroy of F-gas (GHG except for energy-related CO2, etc.) from used equipment instead of releasing to air, and reduce emissions |
| FY2022<br>Draft budget<br>(USD) | <u>approx. 171 million</u><br><u>in total by FY2024</u>  | approx. 10 million  | approx. 0.60 million   |
| Type of<br>support              | Subsidy  | Grant (Sovereign) / Interest<br>Buy-down (Non-sovereign)  | Subsidy  |
| More info                       | <ul style="list-style-type: none"> <li><a href="https://gec.jp/jcm/kobo/">https://gec.jp/jcm/kobo/</a></li> <li><a href="https://www.carbon-markets.go.jp/eng/jcmgp/index.html">https://www.carbon-markets.go.jp/eng/jcmgp/index.html</a></li> </ul> | <a href="https://www.adb.org/what-we-do/funds/japan-fund-for-joint-crediting-mechanism">https://www.adb.org/what-we-do/funds/japan-fund-for-joint-crediting-mechanism</a> | Please contact us.   |

Need business partners? **JCM Global Match:** <https://gec.jp/jcm/globalmatch/>



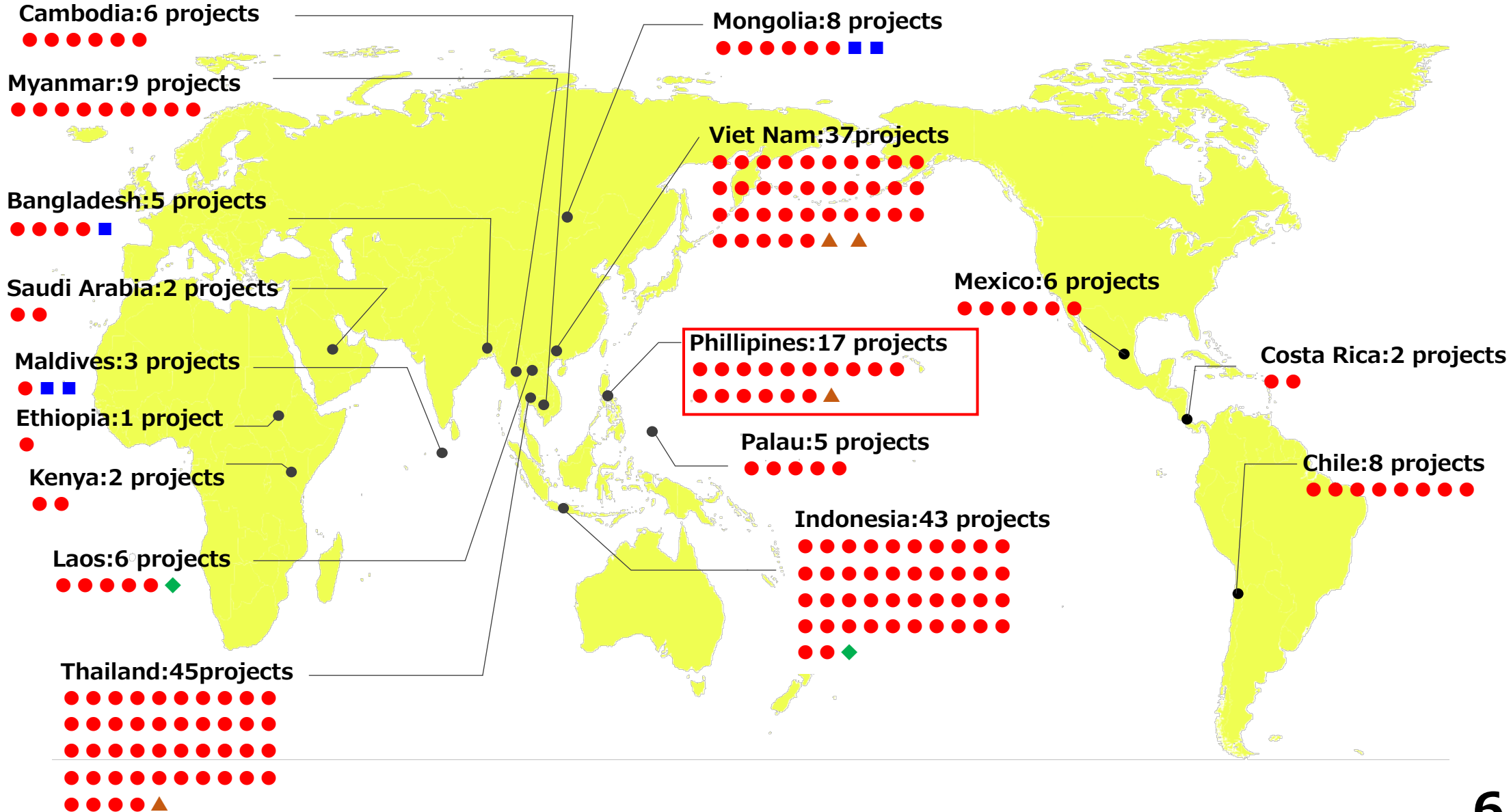
# JCM Financing Programmes by MOEJ (FY2013~2021) (December, 2021)

**Total 205 projects (17 partner countries)**

(● Model Project: 194 projects (including Eco Lease: 3 project), ■ ADB: 5 projects, ◆ REDD+: 2 projects, ▲ F-gas: 4 projects) Other 1 project in Malaysia

**118 projects** have been started operation.

**58 projects with** have been registered as JCM projects.



# Examples of the JCM Model Projects

## Renewable Energy



Solar power, FARMLAND Co., Ltd., Chile



Floating Solar PV, TSB Co., Ltd., Thai



Hydro Power Plant, Toyo Energy Farm Co., Ltd., Indonesia



Biogas Power Generation and Fuel Conversion Project, ITOCHU Corporation, Philippine



Binary Power Generation Project at Geothermal Power Plant, MHI, Ltd., Philippines

## Energy efficiency [Consumer sector]



High-efficiency refrigerator, Mayekawa MFG, Indonesia



Energy saving at convenience stores, Panasonic, Indonesia



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

## Energy efficiency [Industrial sector]



Regenerative Burners in industries, Toyotsu Machinery, Indonesia



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

## Energy efficiency [Urban sector]



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



Amorphous transformers in power distribution, Hitachi Materials, Vietnam

## Waste



Power Generation with Methane Gas Recovery System, NTTDATA, Mexico



Waste to Energy Plant, JFE engineering, Myanmar

## Transport



CNG-Diesel Hybrid Public Bus, Hokusan Co., Ltd., Indonesia

# Technologies Transferred through the JCM (FY2013-2021)

- Total of 205 JCM Model Projects being selected by MOEJ's Finance Programme in 17 partner countries
- 50% for renewable energy, 40% for energy efficiency, 10% for Effective use of Energy, Transport, Waste to energy, F-gas Recovery and Destruction and REDD+ project

Waste (4) 2%

- Waste to Energy
- Power Generation with Methane Gas

Transport (3) 1%

- Digital Tachographs
- Modal Shift
- CNG-Diesel Hybrid

REDD+ (2) 1%

- Controlling slush and burn

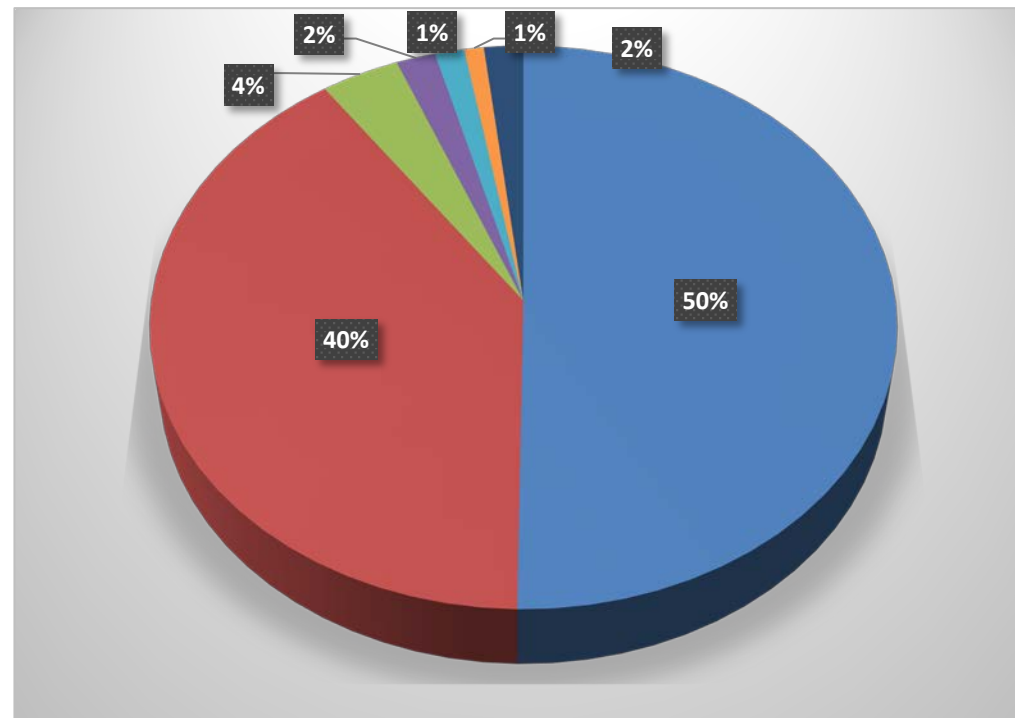
February, 2022

Effective Use of Energy (8) 4%

- Waste Heat Recovery
- Gas Co-generation

Energy efficiency (86) 40%

- Boiler
- Air Conditioning
- Refrigerating/Chiller
- Looms
- Transformer
- LED Lighting



F-gas (4) 2%

- Recovery & Destruction

Renewable energy (108) 50%

- Solar(&Storage battery)
- Micro hydro
- Wind
- Biomass
- Geothermal



# Recent development of the JCM in Philippines



| No. | Entity                              | Project Title   | Sector                         |
|-----|-------------------------------------|---|--------------------------------|
| 1   | Toyota Tsusho Corporation           | 15MW Mini Hydro Power Plant Project in Siguil River in Mindanao   | Renewable Energy               |
| 2   | Tokyo Century Corporation           | Introduction of 1.53MW Rooftop Solar Power System in Auto Parts Factories   | Renewable Energy               |
| 3   | Toyota Motor Corporation            | Introduction of 1MW Rooftop Solar Power System in Vehicle Assembly Factory  | Renewable Energy               |
| 4   | Tokyo Century Corporation           | Installation of 1.2MW Rooftop Solar Power System in Refrigerating Warehouse   | Renewable Energy               |
| 5   | Chodai Co., Ltd.                    | 2.5MW Rice Husk Power Generation Project in Butuan City, Mindanao   | Renewable Energy               |
| 6   | Sharp Energy Solutions Corporation  | Introduction of 4MW Rooftop Solar Power System in Tire Factory  | Renewable Energy               |
| 7   | Chodai Co., Ltd.                    | 0.16MW Micro Hydro Power System in Taguibo Water Supply Facility, Mindanao  | Renewable Energy               |
| 8   | Voith Fuji Hydro K.K.               | 19 MW Mini Hydro Power Plant Project in Isabela Province  | Renewable Energy               |
| 9   | Tokyo Century Corporation           | 18MW Solar Power Project in Collaboration with Power-supply Company   | Renewable Energy               |
| 10  | ITOCHU Corporation                  | Biogas Power Generation and Fuel Conversion Project in Pineapple Canneries  | Renewable Energy               |
| 11  | Chodai Co., Ltd.                    | 33MW Wind Power Project in Caraga Region, Mindanao  | Renewable Energy               |
| 12  | Mitsubishi Heavy Industries, Ltd.   | 29MW Binary Power Generation Project at Palayan Geothermal Power Plant  | Renewable Energy               |
| 13  | Tokyo Century Corporation           | Introduction of 2MW Solar Power System to Shopping Mall (JCM Eco Lease Scheme)  | Renewable Energy               |
| 14  | MITSUI & CO., LTD.                  | 60MW Solar Power Project in Cordon, Isabela   | Renewable Energy               |
| 15  | Mizuho-Toshiba Leasing Company Ltd. | Tanawon 20MW Flash Geothermal Power Plant Project   | Renewable Energy               |
| 16  | Oriental Consultants Co., Ltd.      | Introduction of Energy Saving Air Conditioning System to Quezon City Hall Compound  | Energy Efficiency Improvement  |
| 17  | Marubeni Corporation                | Development of a Fluorocarbon Collection and Destruction Model Project in Metro Manila, Philippines Utilizing Mixed Combustion Technologies | F-gas Recovery and Destruction |

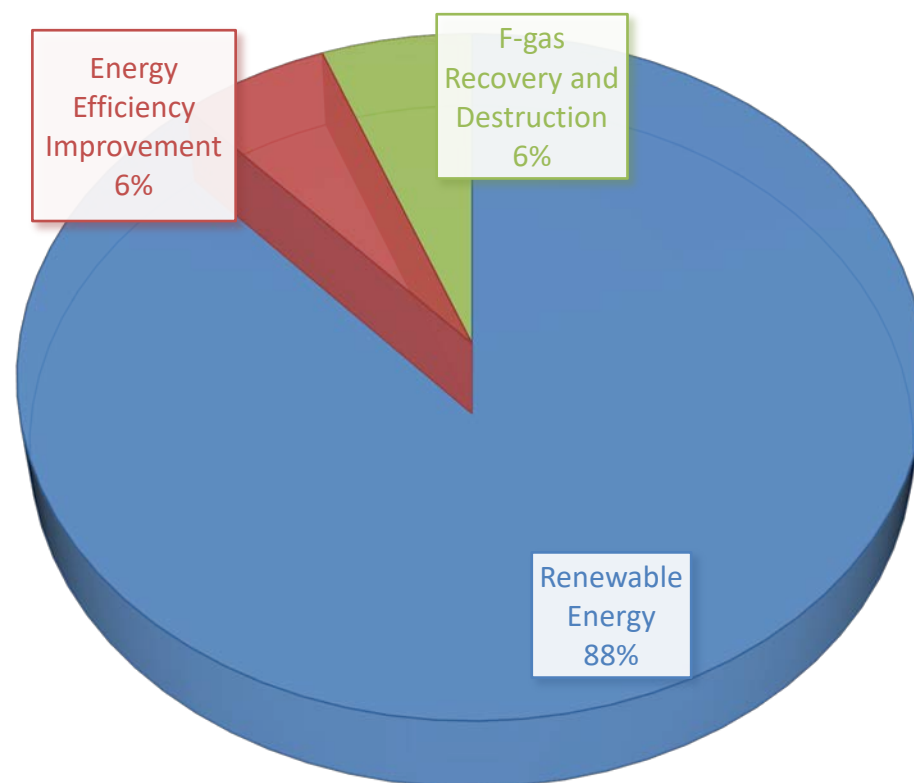
# Recent development of the JCM in Philippines



- 4 Projects were newly selected in FY2021.
- Renewable Energy projects account for the largest proportion. MOEJ would like to support various technology projects.

| Project Title   | Sector                         |
|---|--------------------------------|
| 60MW Solar Power Project in Cordon, Isabela   | Renewable Energy               |
| Tanawon 20MW Flash Geothermal Power Plant Project   | Renewable Energy               |
| Introduction of Energy Saving Air Conditioning System to Quezon City Hall Compound  | Energy Efficiency Improvement  |
| Development of a Fluorocarbon Collection and Destruction Model Project in Metro Manila, Philippines Utilizing Mixed Combustion Technologies | F-gas Recovery and Destruction |

Percentage by technologies of JCM Financing Programmes in Philippines



**New projects from FY2021**



## MOEJ - Implementation of Article 6 following COP26

- At COP26, the Rulebook for the Article 6 (market mechanism) of the Paris Agreement was concluded, paving the way for utilizing market mechanisms to reduce global emissions.
- Leading Article 6 negotiations and being a frontrunner with the experience of the Joint Crediting Mechanism (JCM), Japan will take the following three actions to contribute to global decarbonization.

### < 3 Actions >

- 1. Expanding JCM partner countries, and strengthen project development and implementation in collaboration with international organizations;**
  - Accelerate expansion of the JCM partner countries, **mainly in the Indo-Pacific region and strengthen in African region**
  - Strengthen cooperation with **the Asian Development Bank (ADB), the UN Industrial Development Organization (UNIDO), the World Bank, and others**
- 2. Scale up the JCM by mobilizing further private finance**
- 3. Contribute to the global operationalization of market mechanisms.**
  - Supporting capacity building for related officials and project operators with **UNFCCC's Regional Collaboration Centre (RCC)**.



Regional Collaboration Centre – Bangkok  
Promoting Action Against Climate Change

## Implementation of the Article 6 rules into domestic rules

- Establishment of the **JCM Promotion and Utilization Council** which consists of relevant 5 Ministries at January 2022 (MoEJ, Ministry of Economy, Trade and Industry, Ministry of Foreign Affairs, Ministry of Agriculture, Forestry and Fisheries, and Ministry of Land, Infrastructure, Transport and Tourism)
- The Council's duties include:
  1. the authorization of JCM credits as a Party to the Paris Agreement,
  2. the determination of a method to apply a corresponding adjustment to prevent double counting,
  3. the revision of the Guidelines for the Implementation of the JCM.
- **The draft procedures on the authorization and corresponding adjustment are currently under public consultation process by March 2022.**

※ These are referred in the Guidelines for the Implementation of the JCM in Japan (effective since 17<sup>th</sup> January 2022) as the separately specified procedures.

Thank you for your kind attention



**Ministry of the Environment**