



Ministry of the Environment

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

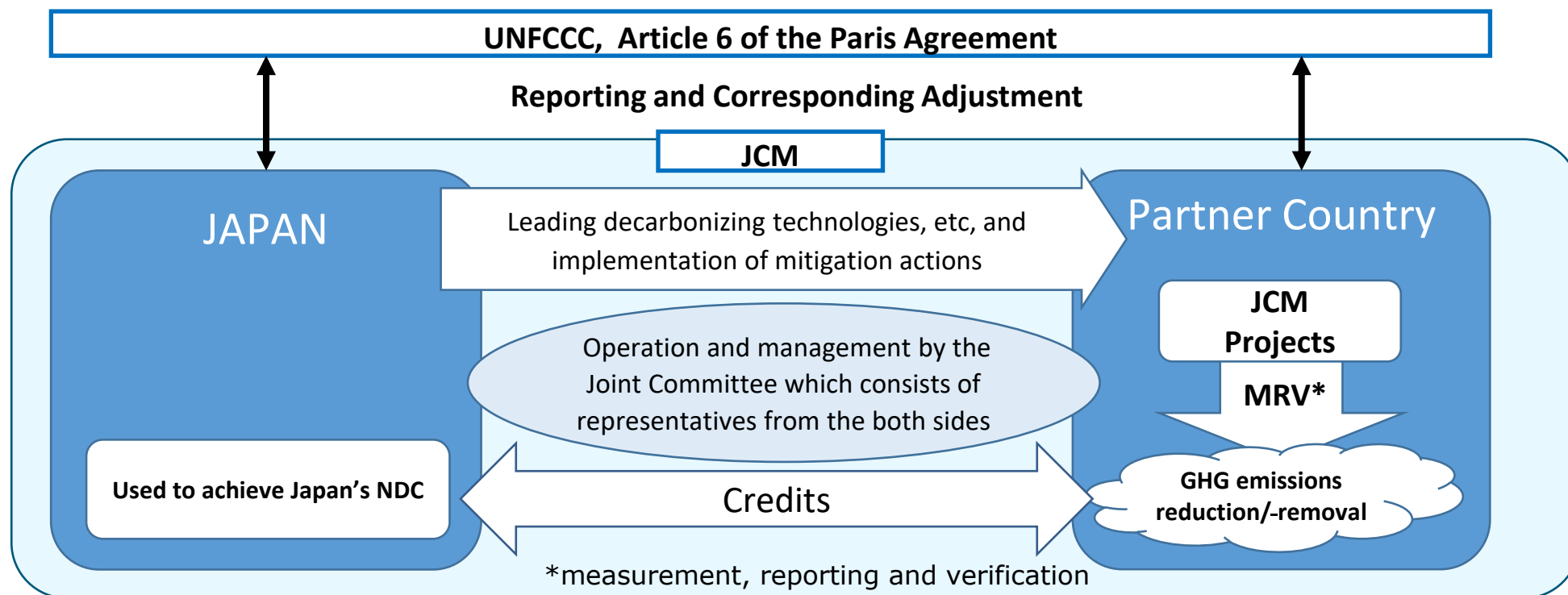
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September 27, 2021

Ministry of the Environment ,Japan



# Basic concept of the JCM and contribution to carbon neutrality

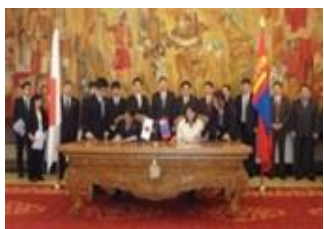


## • Cooperation towards achieving carbon neutrality,

- With the expected agreement on the rules of Article 6 of the Paris Agreement at COP26 in this year, market mechanisms under the Article 6, including the JCM, will benefit not only for GHG emission reductions, but also for the sustainable development of the partner countries.
- Growing expectation for the JCM, allowing GHG emission reductions to be realized in partner countries and contributing to the achievement of both Japan and partner country's NDC.
- MoE Japan is strengthening key public-private partnerships to promote the development of "environmental infrastructures" overseas through JCM.

# 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)



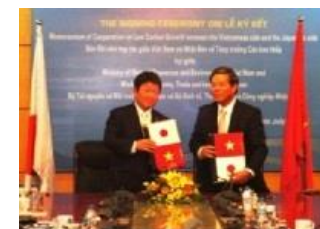
Ethiopia  
May 27, 2013  
(Addis Ababa)



Kenya  
Jun. 12, 2013  
(Nairobi)



Maldives  
Jun. 29, 2013  
(Okinawa)



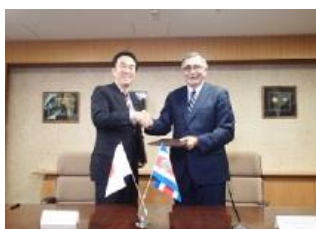
Viet Nam  
Jul. 2, 2013  
(Hanoi)



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)



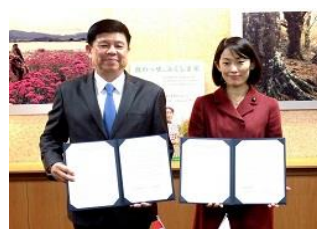
Saudi Arabia  
May 13, 2015



Chile  
May 26, 2015  
(Santiago)



Myanmar  
Sep. 16, 2015  
(Nay Pyi Taw)



Thailand  
Nov. 19, 2015  
(Tokyo)



Philippines  
Jan. 12, 2017  
(Manila)

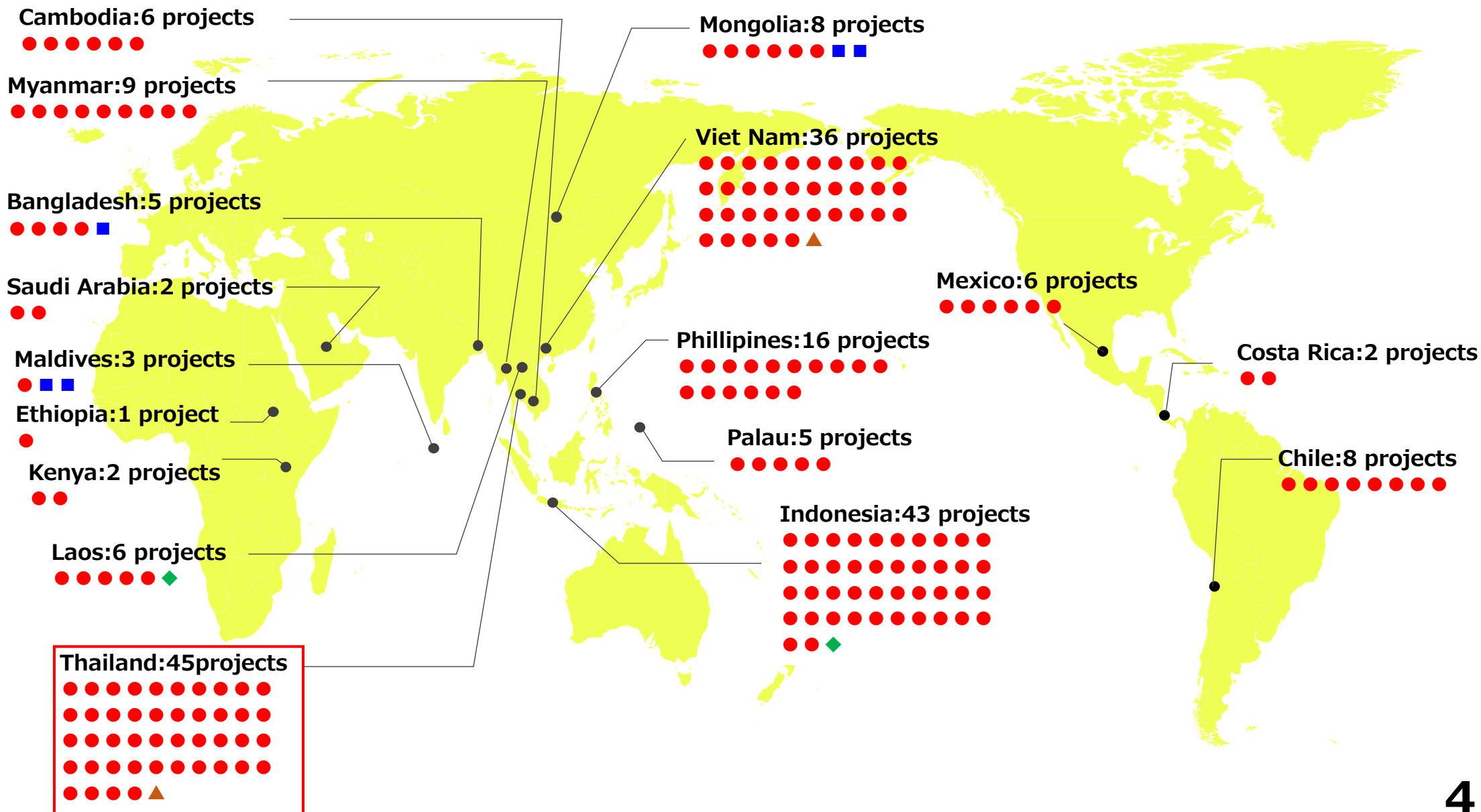
## JCM Financing Programmes by MOEJ (FY2013~2021) (September, 2021)

**Total 203 projects (17 partner countries)**

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

- Facilitating decarbonizing technologies through contributions from Japan
- Evaluating GHG emissions reduction in quantitative manner to issue the credit shared by the partner country and Japan



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



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



**Solar Power System and High Efficiency Refrigerator, Kanematsu KGK Corp., Thai**



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



**Regenerative Burners in industries, Toyotsu Machinery, Indonesia**



**Waste heat recovery in Cement Industry, JFE engineering, Indonesia**



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



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



**Hydro Power Plant, Chodai Co., Ltd., Philippines**



**Power Generation with Methane Gas Recovery System, NTT DATA, Mexico**



**Energy saving at convenience stores, Panasonic, Indonesia**



**Waste to Energy Plant, JFE engineering, Myanmar**



**High-efficiency refrigerator, Mayekawa MFG, Indonesia**



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



**Amorphous transformers in power distribution, Hitachi Materials, Vietnam**

# Technologies Transferred through the JCM (FY2013-2021)

- Total of 203 JCM Model Projects being selected by MOEJ's Finance Programme in 17 partner countries
- 51% for renewable energy, 40% for energy efficiency, 9% 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

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## Effective Use of Energy (8) 4%

- Waste Heat Recovery
- Gas Co-generation

## Energy efficiency (86) 40%

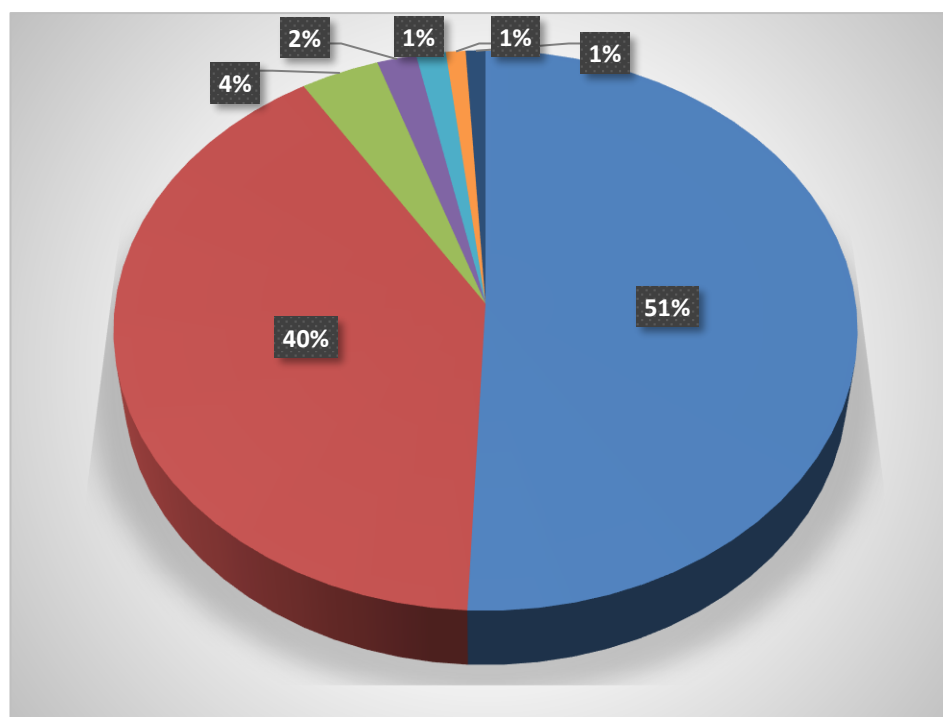
- Boiler
- Air Conditioning
- Refrigerating/Chiller
- Looms
- Transformer
- LED Lighting

## F-gas (2) 1%

- Recovery & Destruction

## Renewable energy (108) 51%

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



# Facilitating global expansion of Environmental Infrastructure through the JCM

## <FY2030 Target >

- Aiming for a cumulative GHG emission reduction of about **100 million tons** of CO2 from JCM projects through public-private partnerships

(maximum project size of about 1 trillion Japanese Yen (approx. ten billion USD) through public-private partnerships with a diversification of funds accelerating the implementation of projects).

- The project will also be used for Japan's emission reduction goal.

⇒To realize above, MOEJ will proceed condition arrangement for JCM expansion

## 1. Renewable Energies

(Solar Power, Wind Power, Hydro Power, Geothermal Energy, Biomass Energy, Green Hydrogen, and so forth)



Solar Power



Wind Power

## 2. Green Logistics (Including Cold Chain)

(Non-Fluorocarbon Cooling System, Modal Shift, Airports, Ports and Harbors, and so forth)



High-Efficient Freezer



Modal Shift

## 3. Waste management Infrastructure

(Waste to Energy, Recycling system, Landfill and so forth)



Waste to Energy

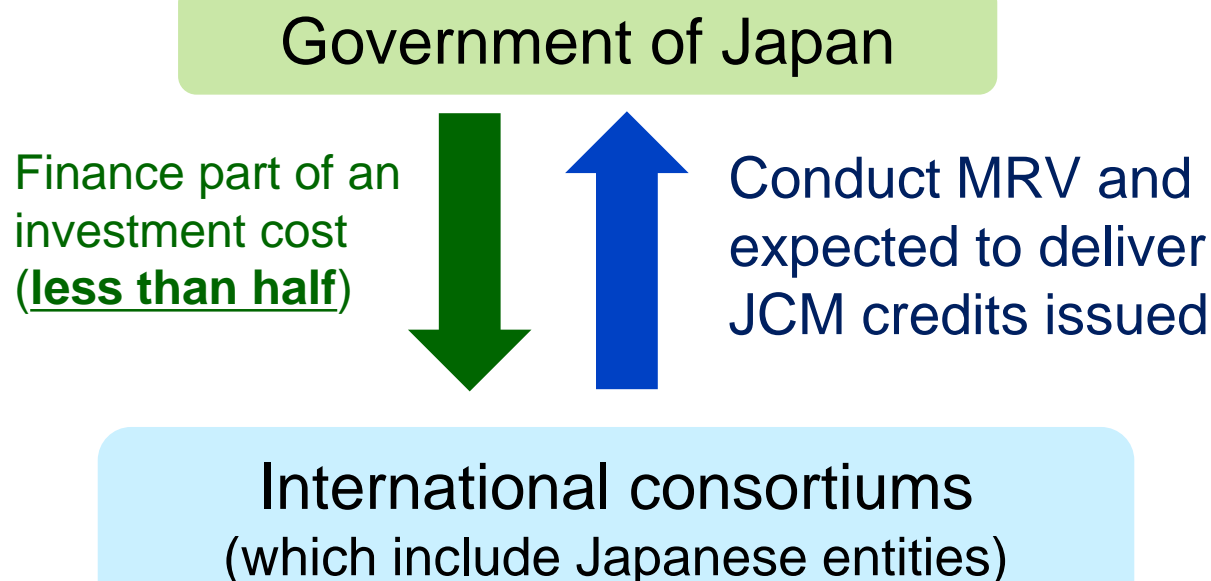


Improvement of landfill (Fukuoka method)

※ Further including energy efficient facilities, effective use of energies, CCUS, fluorocarbons recovery and destruction, Johkasou, and REDD+, in addition to the above



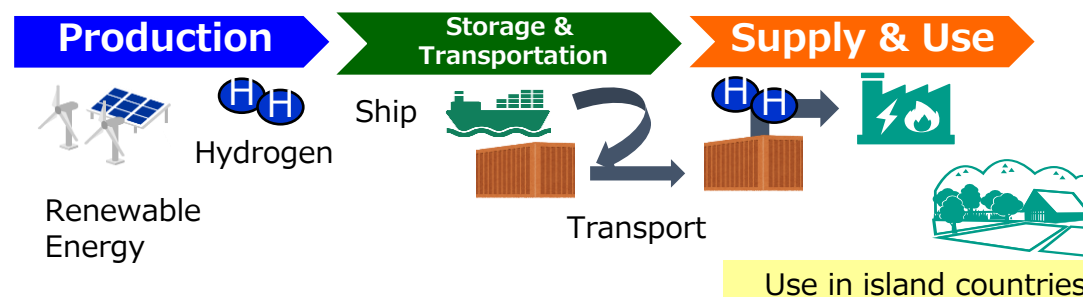
# FY2021 JCM Finance Programme by MOEJ



**Budget for projects starting from FY 2021 is about 8.8 billion JPY (approx. USD 88 million) \* in total by FY2023**

\*including

- Financing Program to Demonstrate Decarbonization Technology for Realizing Co-Innovation
- Pilot project for comprehensive support throughout the whole hydrogen supply chain abroad

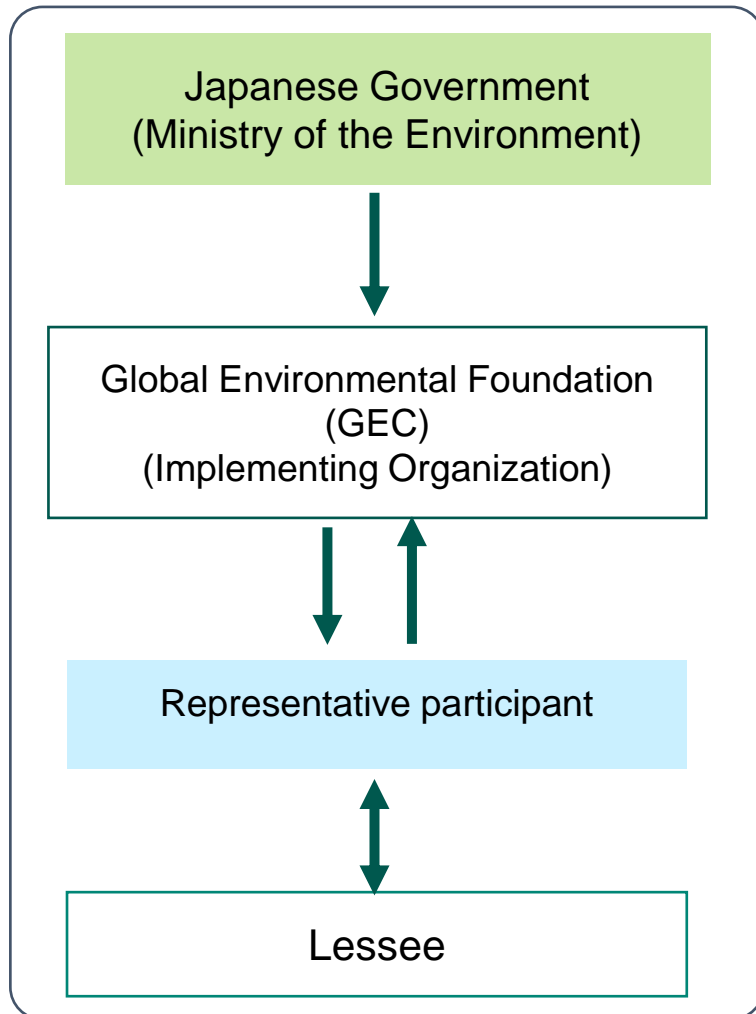




# JCM Model Projects by MOE (JCM ECO Lease Scheme)

- “JCM Eco Lease” scheme is financial support for leasing businesses.
- Financial support is uniformly 10% of total leasing charge including leasing interest.
- Leasing period is at least 5 years.

## Chart of JCM ECO Lease Scheme



### <Merit>

- Shorter MRV period
  - Equivalent to leasing period (At least 5years)
- Simplified process
  - Less documents for application
  - No need to develop new methodology (Only applicable to approved methodology)

### <Examples of eligible facilities/equipment>



PV



High Efficiency equipment

# JCM F-gas Recovery and Destruction Model Project by MOEJ

【Budget for FY 2021】

60 million JPY (approx. 0.60 million USD) (1 USD = 100JPY)

Finance part of the cost in flat-rate

Government of Japan

Conduct MRV to estimate GHG emission reductions. At least half or ratio of financial support to project cost (larger ratio will be applied) of JCM credits issued are expected to be delivered to the government of Japan

International consortiums (which include Japanese entities)

Manufacturers of equipment which uses F-gas

Users of equipment which uses F-gas

Entities for recovery and transportation of used F-gas (recycling or scrap entities)

Entities for destruction of used F-gas (may use existing facility for destruction)

**Purpose:** To recover and destroy F-gas (GHG except for energy-related CO<sub>2</sub>, etc) from used equipment instead of releasing to air, and reduce emissions

**Scope of Financing:**

- Establish scheme for recovery and destruction
- Install facilities/equipment for recovery/destruction
- Implementation of recovery, transportation, destruction and monitoring

**Project Period:**

Three years in maximum (Ex. 1st year for scheme, 2nd year for facilities, 3rd year for recovery/destruction)



# ADB Trust Fund: Japan Fund for Joint Crediting Mechanism (JFJCM)

## Budget for FY2021:

JPY 1 billion (approx. USD 10 million)

## Scheme:

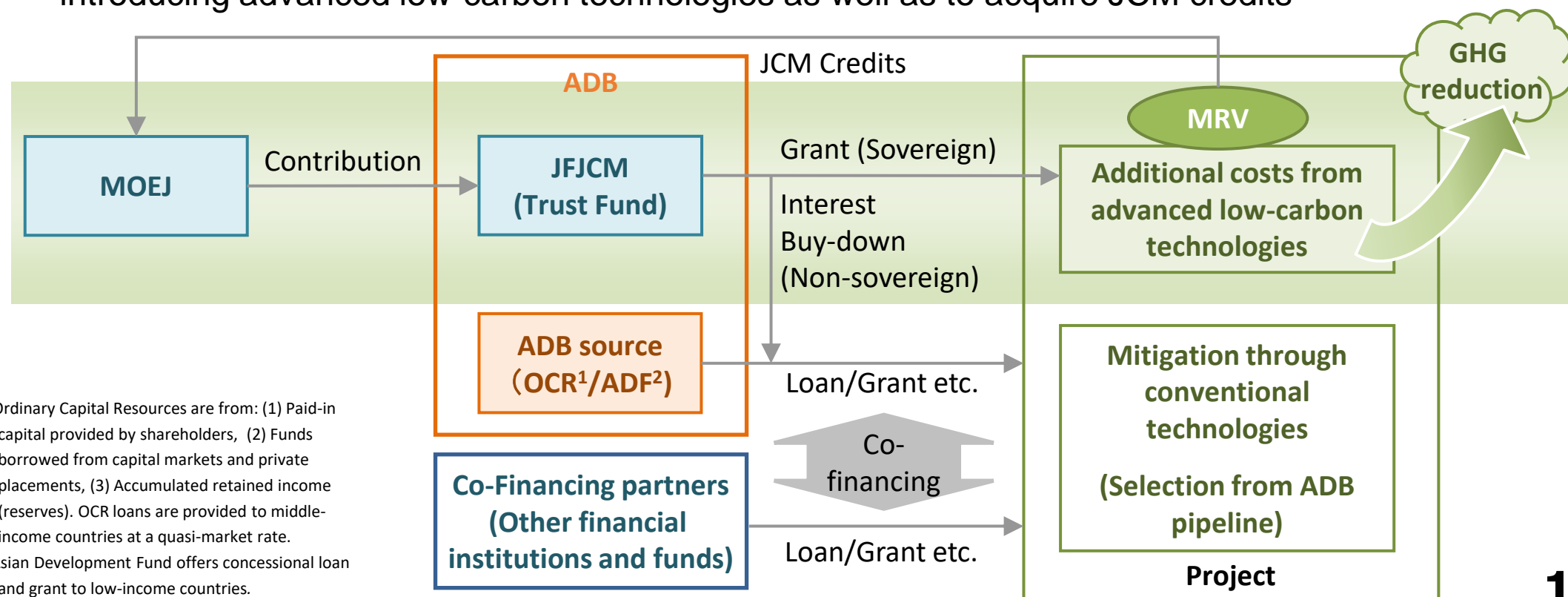
To provide the financial incentives for the adoption of advanced low-carbon technologies which are superior in GHG emission reduction but expensive in ADB(Asian Development Bank)-financed projects

## Purpose:

To develop ADB projects with sustainable and low-carbon transition perspective by introducing advanced low-carbon technologies as well as to acquire JCM credits



Maldives, POISED PJ



<sup>1</sup> Ordinary Capital Resources are from: (1) Paid-in capital provided by shareholders, (2) Funds borrowed from capital markets and private placements, (3) Accumulated retained income (reserves). OCR loans are provided to middle-income countries at a quasi-market rate.

<sup>2</sup> Asian Development Fund offers concessional loan and grant to low-income countries.

Thank you for your kind attention



**Ministry of the Environment**