JCM THE JOINT CREDITING MECHANISM

Update of Recent Progress of The Joint Crediting Mechanism

March 2025

Ministry of the Environment

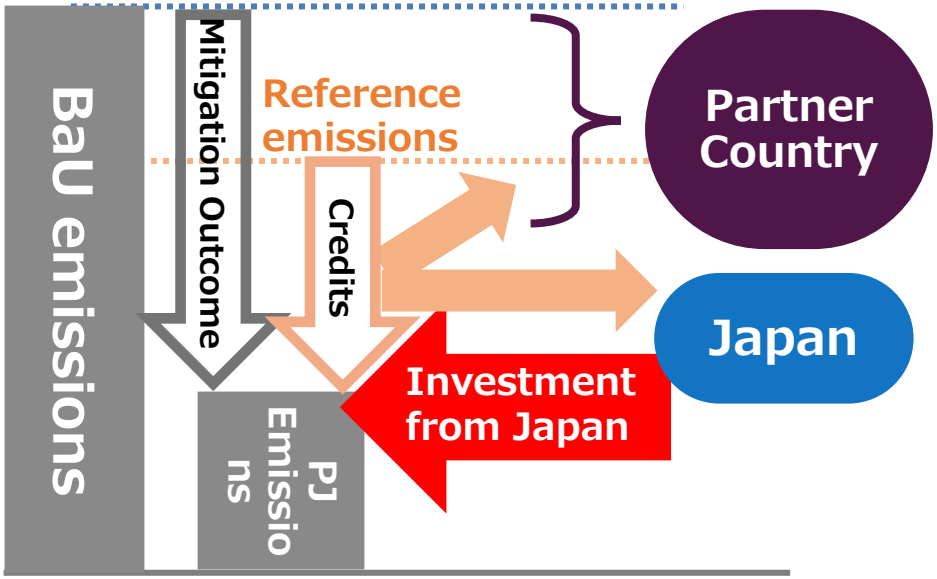
Index

Overview of the JCM

Basic Concept of the Joint Crediting Mechanism(JCM)

- In partner countries(29 as of Mar 2025), Japanese companies and government collaborate on mitigation activities. The achieved mitigation outcomes will be shared as JCM credits between the partner countries and Japan in proportion to their respective contributions.
- **The JCM credits incentivize investment** by Japanese companies and government in various decarbonization projects bringing **various benefits including contribution to achievement of NDC** and further decarbonization, diffusion of new technologies and addressing socio-economic challenges.

Basic Concept



JCM Projects (Over 250 as of Mar 2025)

Renewable Energy

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

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

Energy efficiency

Optimization in petroleum refining plant, Yokogawa Electric Corp. Indonesia

Effective Use of Energy

Gas Co-generation System and Absorption Chiller, Kansai Electric Power, Thailand

Waste

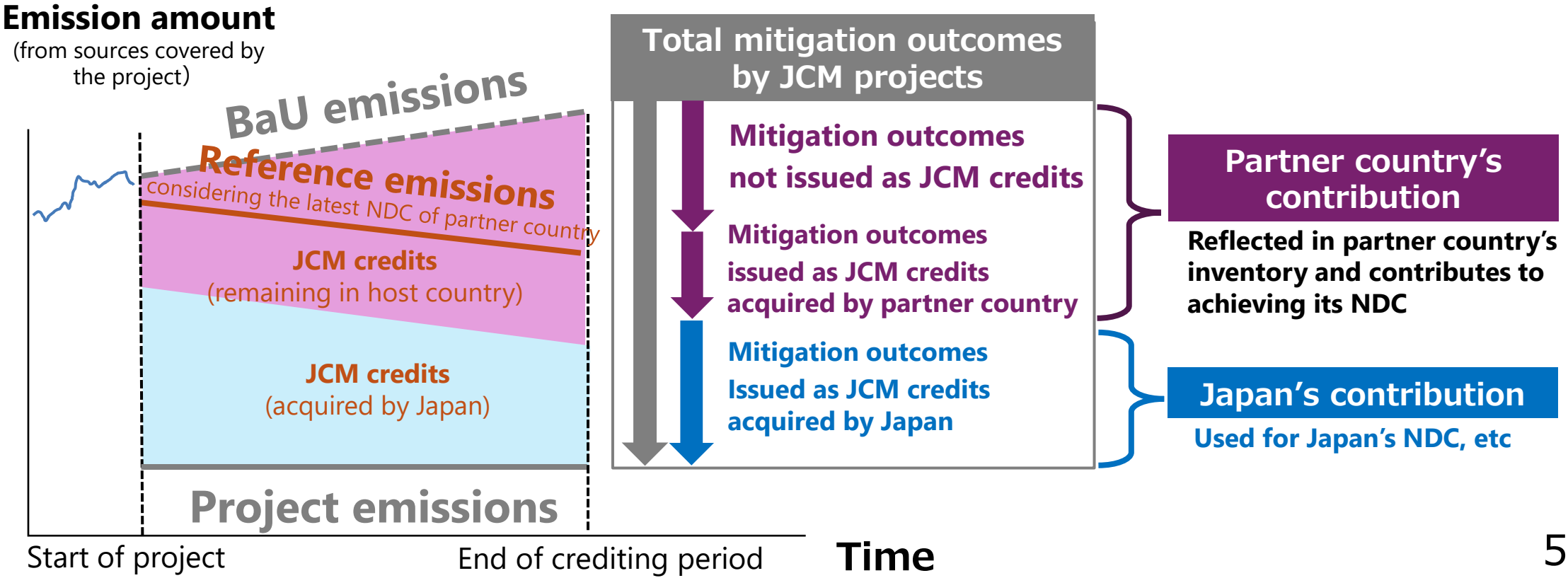
Waste to Energy Plant, JFE engineering, Viet Nam

Transport

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

Evaluation and crediting of mitigation outcomes under the JCM

1. Mitigation outcomes issued as **JCM credits are the difference between project emissions and reference emissions** that are established considering the **latest NDC of partner country**.
2. **Total mitigation outcomes by JCM projects,** the difference between business-as-usual (BaU) and project emissions, **consist of mitigation outcomes that is NOT issued as JCM credits, mitigation outcomes issued as JCM credits acquired by partner countries and Japan.** All of them **contribute to achieving their NDCs**.
3. **Allocation of total mitigation outcomes for each government and participant** will be consulted bilaterally, taking into consideration their **respective contributions to the JCM project .** Such contribution includes **private and public financial contributions, in-kind contributions, such as technical and operational contributions**.



The JCM and Paris Agreement

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- The JCM is consistent with Article 6 which prescribes for the use of emissions reductions realized overseas towards national emissions reduction targets.
- The amount of mitigation outcomes acquired by Japan under the JCM will be appropriately counted as Japan's reduction.
- Article 6 requires both Parties to authorize the use of carbon credits as ITMOs (internationally transferred mitigation outcomes) and apply robust corresponding adjustment to ensure the avoidance of double counting.

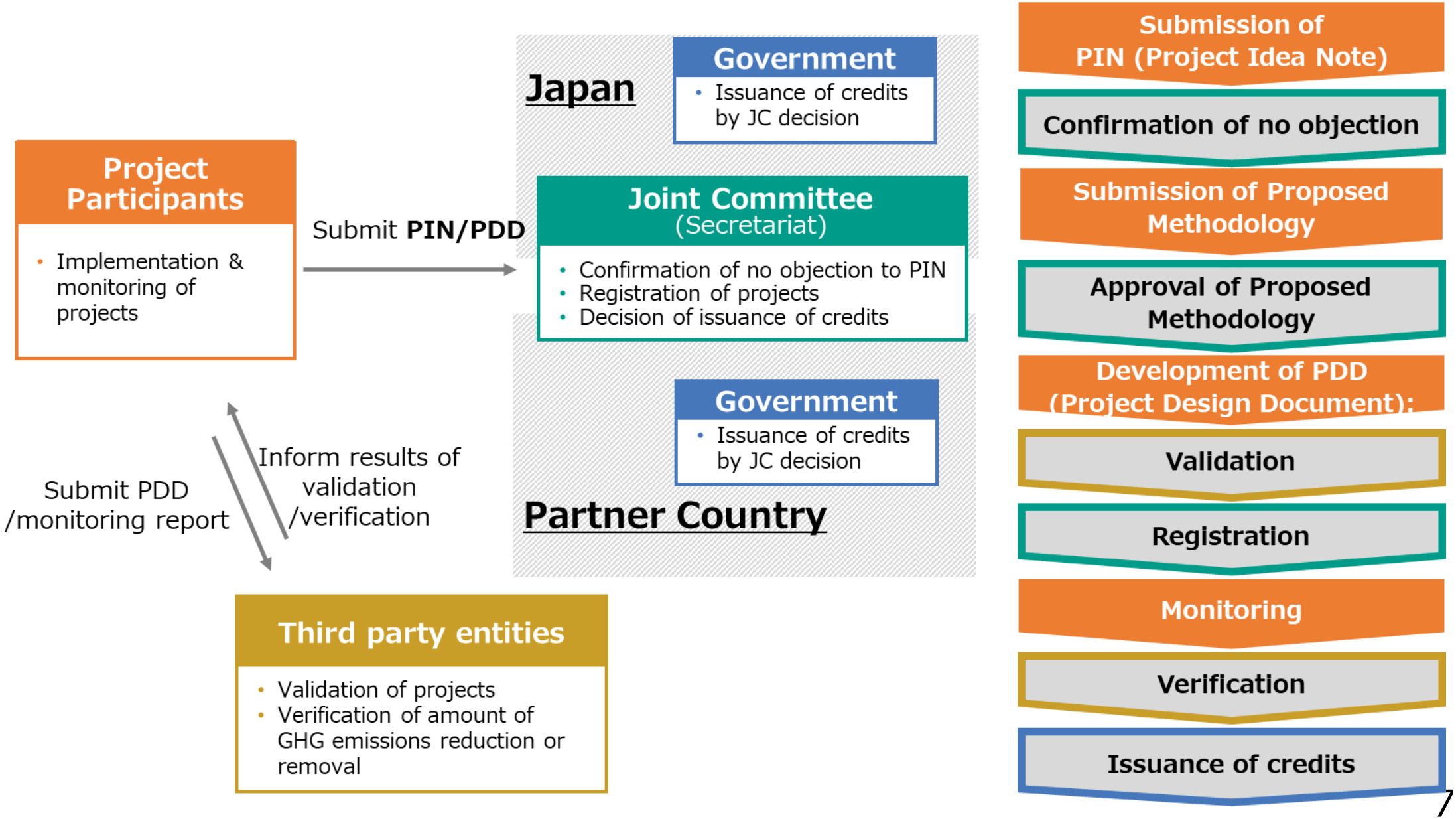
Article 6 of Paris Agreement

2. Parties shall, where engaging on a voluntary basis in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards nationally determined contributions, promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.

3. The use of internationally transferred mitigation outcomes to achieve nationally determined contributions under this Agreement shall be voluntary and authorized by participating Parties.s

Scheme of the JCM project cycle

- The JCM fully ensures transparency and environmental integrity through a robust governance structure and project cycle procedures.



30 friends including Japan

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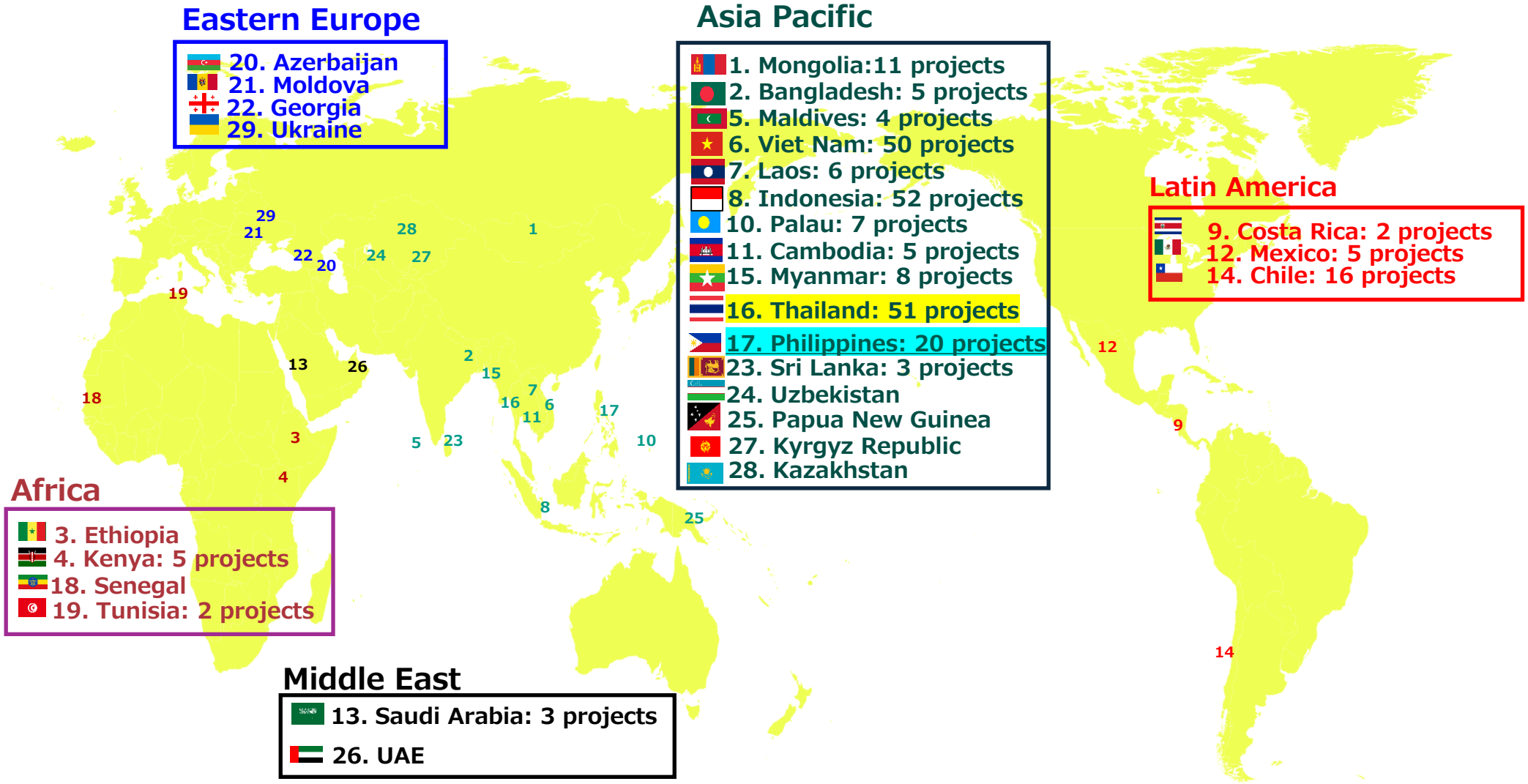

JCM progress

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- 29 JCM Partner countries
- More than 250 Projects
- Over 3 billion USD of investment

Sectors of JCM projects

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- So far, there have been **257 technology adoptions**.
- 56% of these are related to renewable energy, followed by 34% for energy efficiency, making up the majority.

Waste 2%

- Waste to Energy
- Power Generation with Methane Gas

Transport 1%

- Digital Tachographs
- Modal Shift
- CNG-Diesel Hybrid

REDD+ 1%

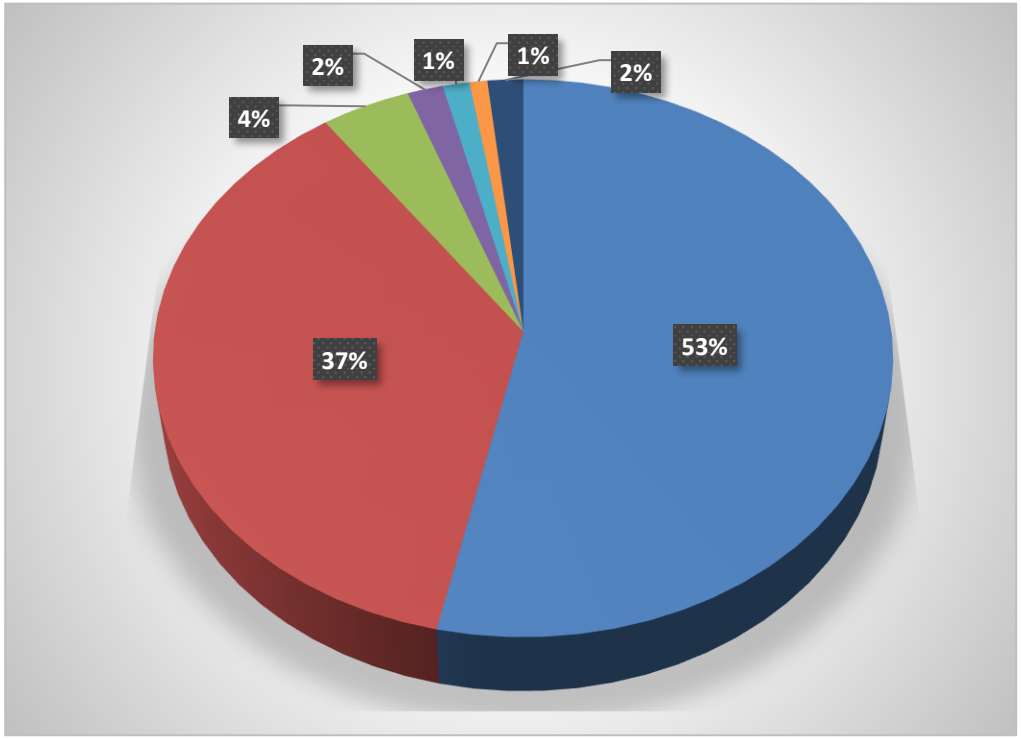
- Controlling slush and burn

Effective Use of Energy 4%

- Waste Heat Recovery
- Gas Co-generation

Energy efficiency 37%

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



F-gas 2%

- Recovery & Destruction

Renewable energy 53%

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

Potential JCM Projects in India

Eligible activities under Art 6.2 in India

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Activities finalised to be considered for trading of carbon credits under Article 6.2 mechanism to facilitate transfer of emerging technologies and mobilise international finance in India

Ⅰ. GHG Mitigation Activities:

1. **Renewable energy with storage (only stored component)**
2. Solar thermal power
3. Off- shore wind
4. Green Hydrogen
5. Compressed bio-gas
6. Emerging mobility solutions like fuel cells
7. **High end technology for energy efficiency**
8. Sustainable Aviation Fuel
9. **Best available technologies for process improvement in hard to abate sectors**
10. Tidal energy, Ocean Thermal Energy, Ocean Salt Gradient Energy, Ocean Wave Energy and Ocean Current Energy
11. **High Voltage Direct Current Transmission in conjunction with the renewal energy projects**
12. Clean cooking using renewable energy at scale (Government or Public-Private Partnership PJ only)

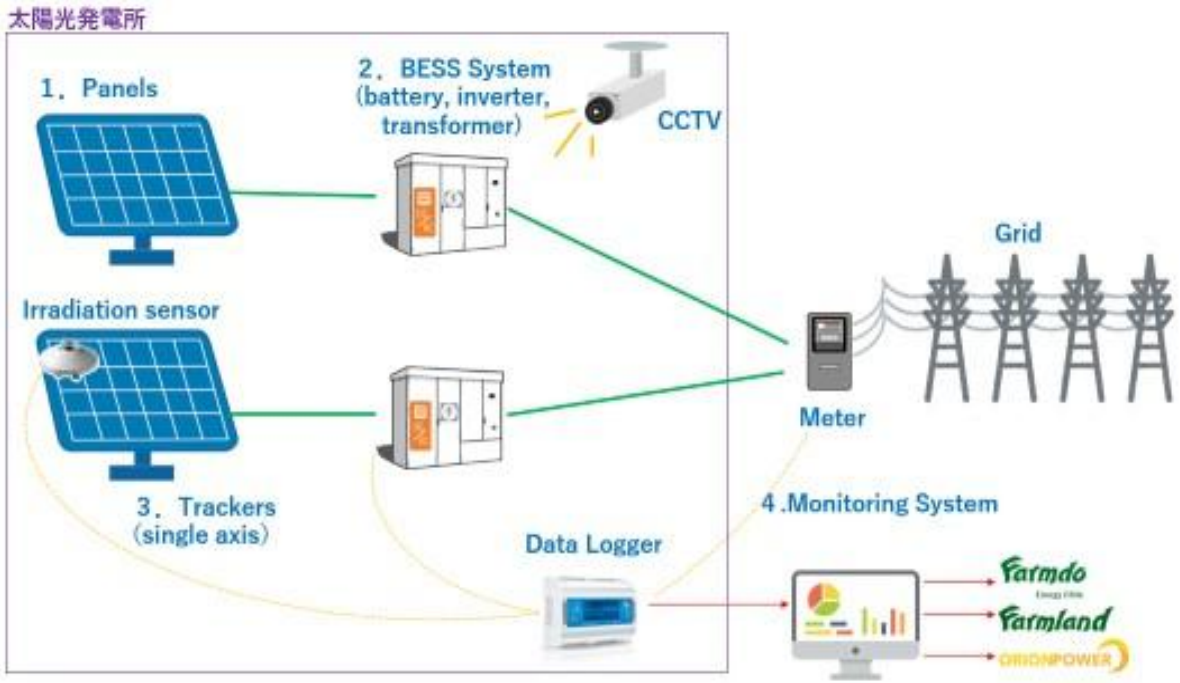
Ⅱ. Alternate Materials: **13.** Green Ammonia

Ⅲ. Removal Activities: **14.** **Carbon Capture Utilization and Storage**

26.3MW Solar Power and 48MWh Storage Battery Project Utilizing Farmland in the Metropolitan Area and O'Higgins Region

PP (Japan): Farmland Co., Ltd.,
PP (Chile): Farmdo Energy Chile SpA, Orion Power S.p.A.

Chile



- 26.3MW solar power facility with single-axis trackers and a 48MWh battery on leased 3 farmlands in the metropolitan area and in the O'Higgins Region.
- By participating in the Pequenos Medios de Generacion Distribuida (PMGD) established by the Chilean government and selling electricity to power distribution companies, the project aims to reduce greenhouse gas (GHG) emissions and supply sustainable clean electricity.

Expected Reductions

20,197 tCO_2 /year

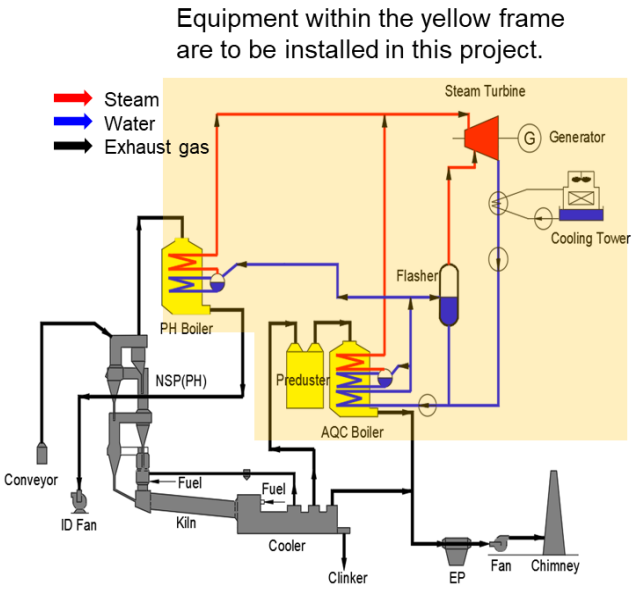
・Reference CO_2 emissions
= (Quantity of the electricity generated by the project) [MWh/year] × Emission factor [tCO_2/MWh]

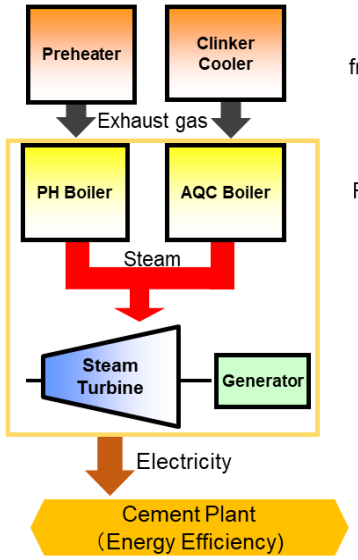
・Project CO_2 emissions = 0 [tCO_2/year]

Introduction of 6MW Power Generation System by Waste Heat Recovery for Cement Plant

PP (Japan): GLOBAL ENGINEERING Co., Ltd.
PP (Philippines): REPUBLIC CEMENT & BUILDING MATERIALS

Philippines





Unused waste heat from the cement plant

Recover waste heat

Generate electricity with turbine

- 6MW waste heat recovery power generation system in the existing cement manufacturing plant in Bulacan in the Central Luzon region.
- The system makes use of the unused waste heat, which is released during the calcining process of cement production, to generate electricity and effectively reduces electricity from fossil fuel, resulting in the reduction of greenhouse gas (GHG) emissions.

Expected Reductions

21,244
tCO_2 /year

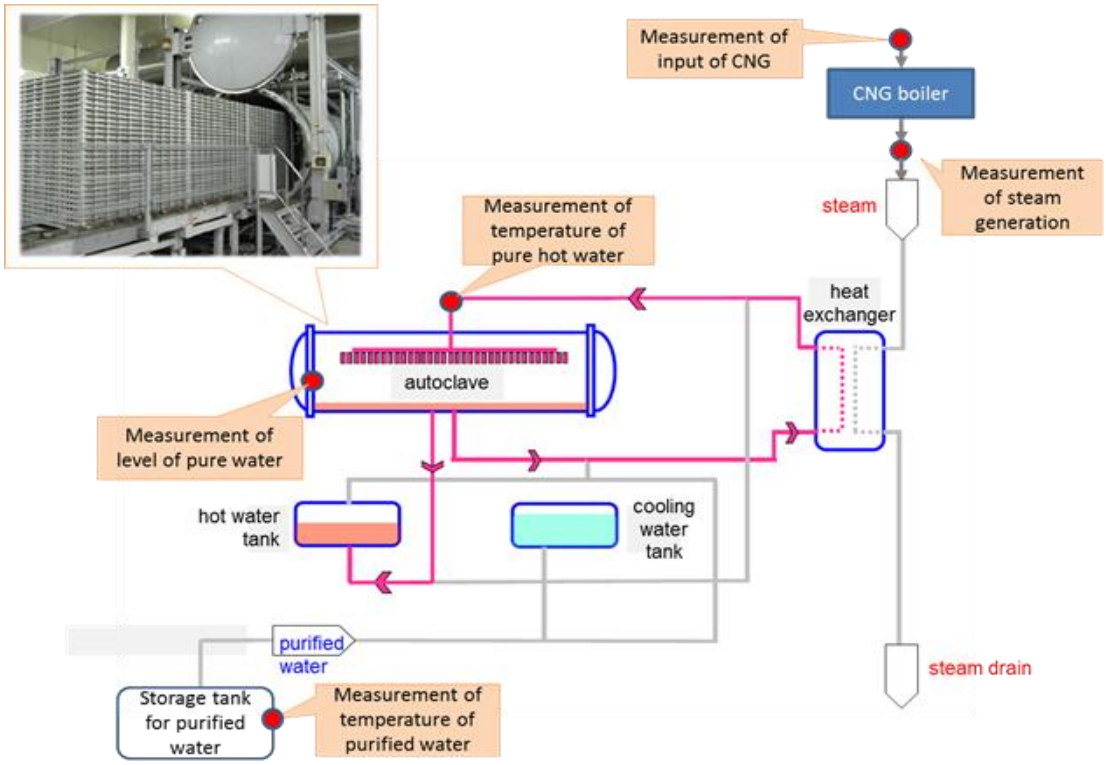
Reference CO_2 emissions
= (Quantity of the electricity generated by the project) [MWh/year]
× Emission factor [tCO_2/MWh]

・Project CO_2 emissions
= 0 [tCO_2/year])

Energy Saving by Introducing High Efficiency Autoclave to Infusion Manufacturing Factory 2

PP (Japan): Otsuka Pharmaceutical Factory, Inc.
PP (Indonesia): PT. Otsuka Indonesia

Indonesia



- At a new infusion manufacturing factory, a new type of high efficiency autoclave, which fulfills the Good Manufacturing Practice (GMP) and realizes energy and resource saving, is introduced.
- Since the hot water to be injected into the autoclave is maintained at a high temperature, both the amount of steam charged in a batch unit and consumption of natural gas (CNG) required for steam generation are reduced. In addition, pure water used in the sterilization process is reused.

Expected Reductions

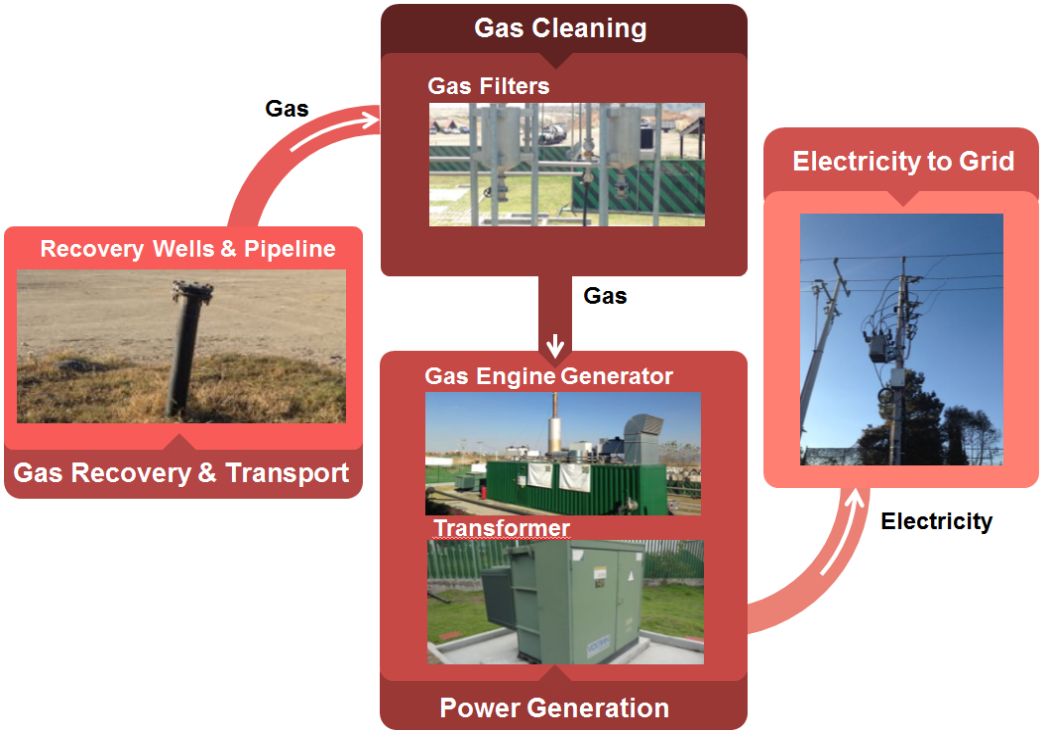
8,806
tCO_2 /year

Expected Reductions
=(Reference CNG consumption volume
– project CNG consumption volume) X Emission factor of CNG.

Introduction of 1.2MW Power Generation with Methane Gas Recovery System

PP (Japan): JNTT DATA INSTITUTE OF MANAGEMENT CONSULTING, Inc.,
PP (Mexico): MGM Metano Mexicano, S. de R.L. de C.V., Energreen Holdings, S.A.P.I. de C.V.

Mexico



- This project is power generation by gas engine using collected methane gas from landfill at a landfill site in Mexico.
- The methane gas recovery system consists of recovery wells, pipelines, gas filters, gas engine generator and transformer. Captured methane gas is transported to the gas engine power generation facilities through pipelines and filters.
- Electricity generated from the gas engine generator will be sold under long-term PPAs with regional power companies.

Expected Reductions

43,435 tCO_2 /year

Emission reductions by electricity generation + Emission reductions by methane recovery

Emission reductions by electricity generation
= 4,106 [tCO2/year]
Emission reductions by methane recovery
= 39,329 [tCO2e/year]

Policies to promote the JCM

The Government of Japan will launch new agency covering ALL the operation of JCM In April 2025

- ***One stop focal point for the JCM on behalf of Japanese government***
- ***Implementation and facilitation of the JCM, including promoting JCM projects***
- ***In charge for ensuring environmental integrity and transparency of the JCM***

Upgrading JCM website and registry

JCM Website

■Publishment of JCM projects・Credit issuance

JCM Registry system

■Credit Issuance・management

New JCM registry system

Japan has submitted new NDC

2030 100million ton by JCM

*Accumulated

2040 200million ton by JCM

*Accumulated

GX ETS will start in 2026

- Mandatory ETS
- Can use compliance credits

Creating huge demand for JCM

Financial programs by Japanese Government

	Programme	Type of support
Ministry of the Environment	Subsidies for JCM projects	Subsidy
	Project development/capacity building/MRV support	Technical cooperation
Ministry of Economy, Trade and Industry	JCM Feasibility Study	Technical cooperation
	JCM Demonstration Programme	Government-commissioned project
Ministry of Agriculture, Forestry and Fisheries	Development of MRV for JCM projects in Agriculture – implemented by ADB	Technical cooperation
	Field studies for JCM REDD+	Government-commissioned project

Subsidies for JCM projects by MOEJ

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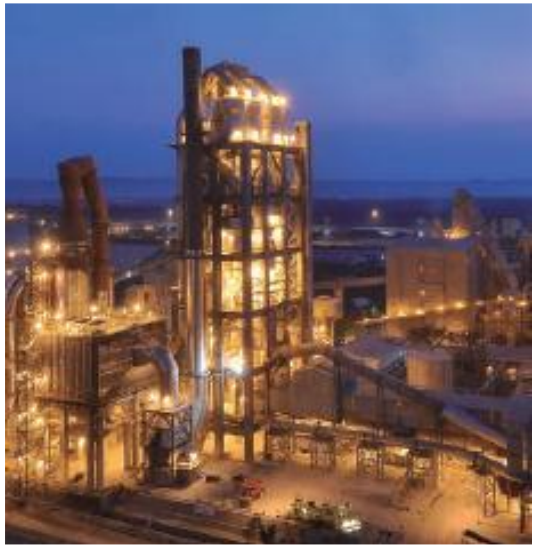
Government of Japan

Subsidies to investment cost (**up to half**)

2025 budget
13 billion JPY
85 million USD

International consortiums
(including Japanese entities)



Thank you for listening

JCM partnership meeting