

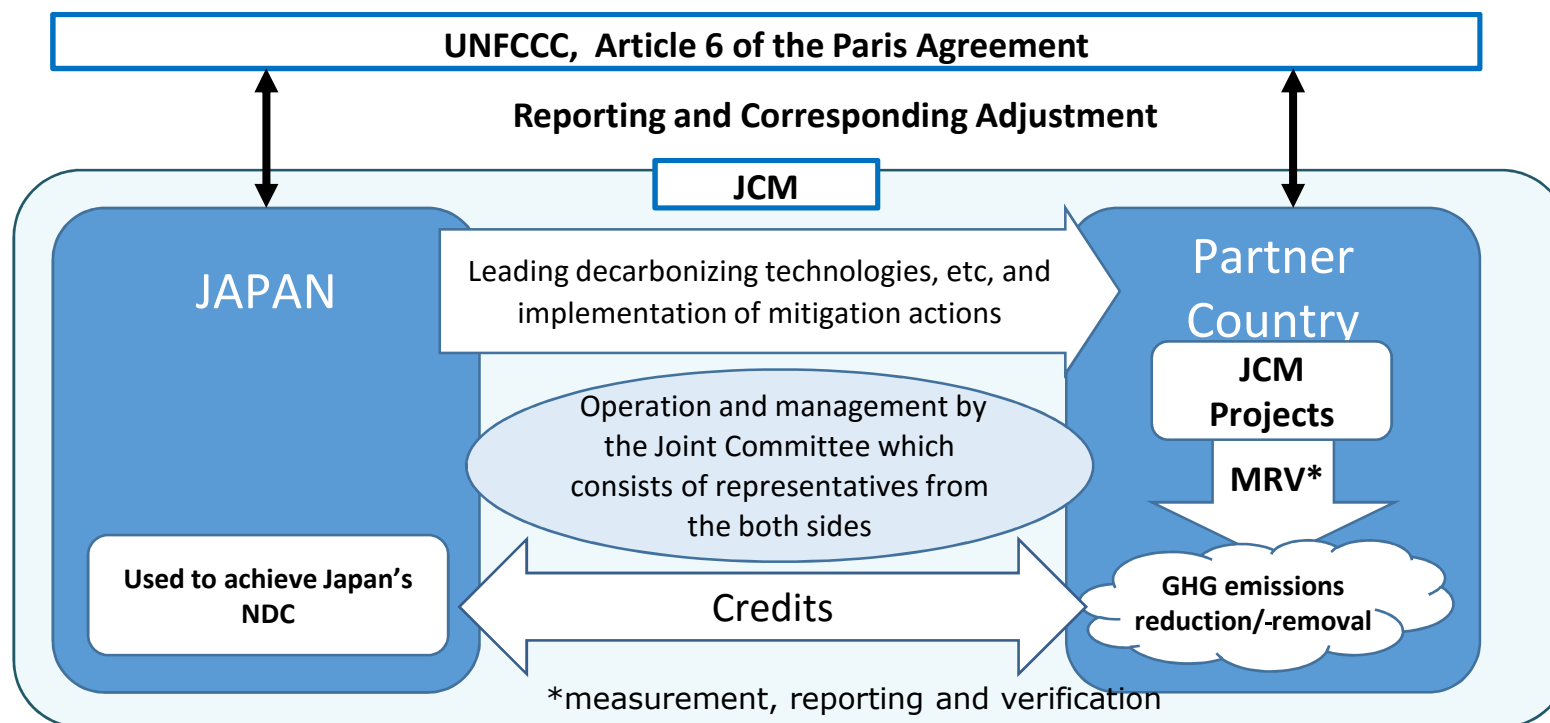
# Recent Developments of The Joint Crediting Mechanism (JCM)

July 2021  
Government of Japan

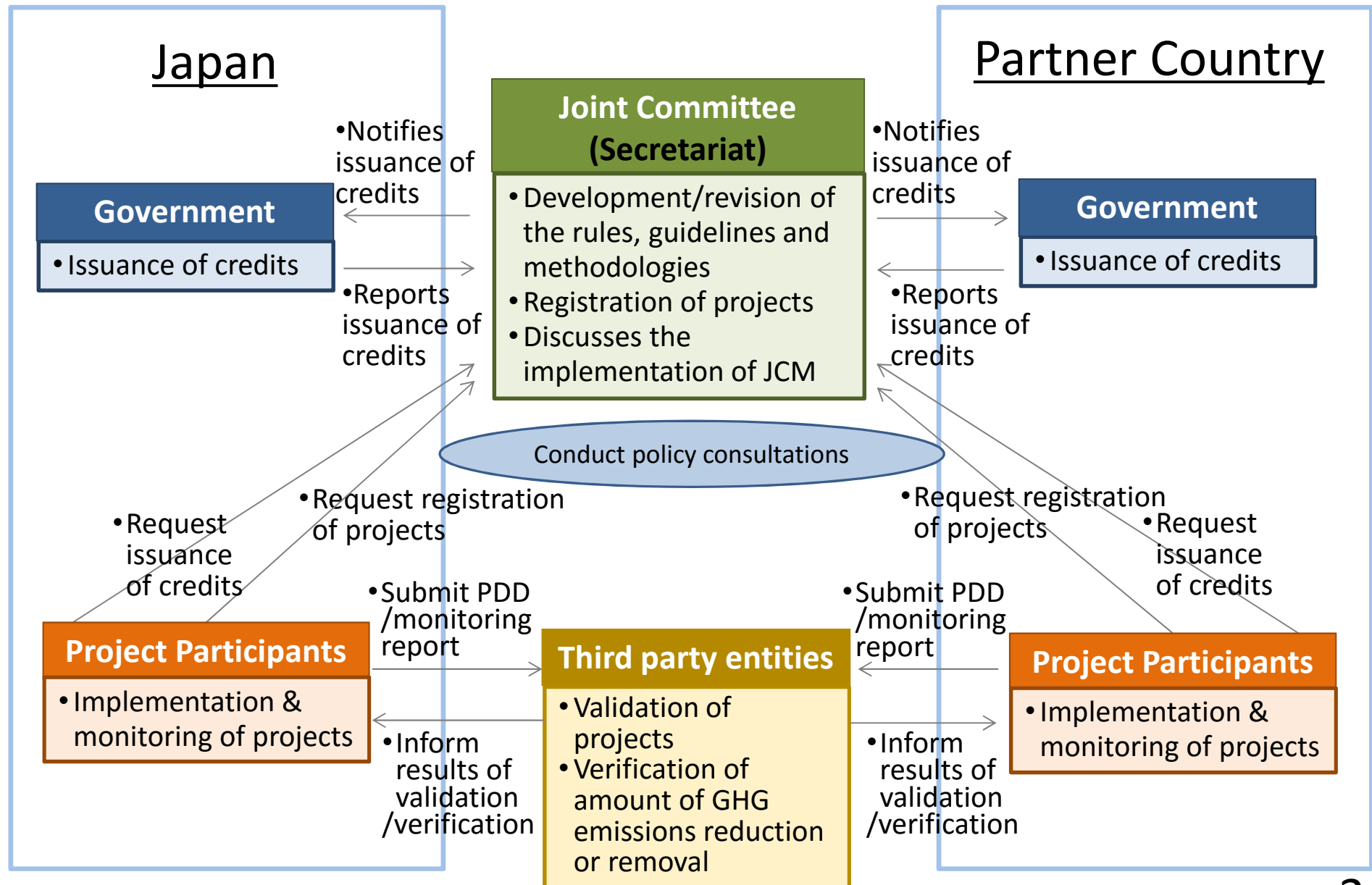
*All ideas are subject to further consideration and discussion with partner countries*

## Basic Concept of the JCM

- Facilitating diffusion of leading decarbonizing technologies ,etc and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of partner countries.
- Appropriately evaluating contributions from Japan to GHG emission reductions or removals in a quantitative manner and use them to achieve Japan's NDC.
- Contributing to the ultimate objective of the UNFCCC by facilitating global actions for GHG emission reductions or removals.



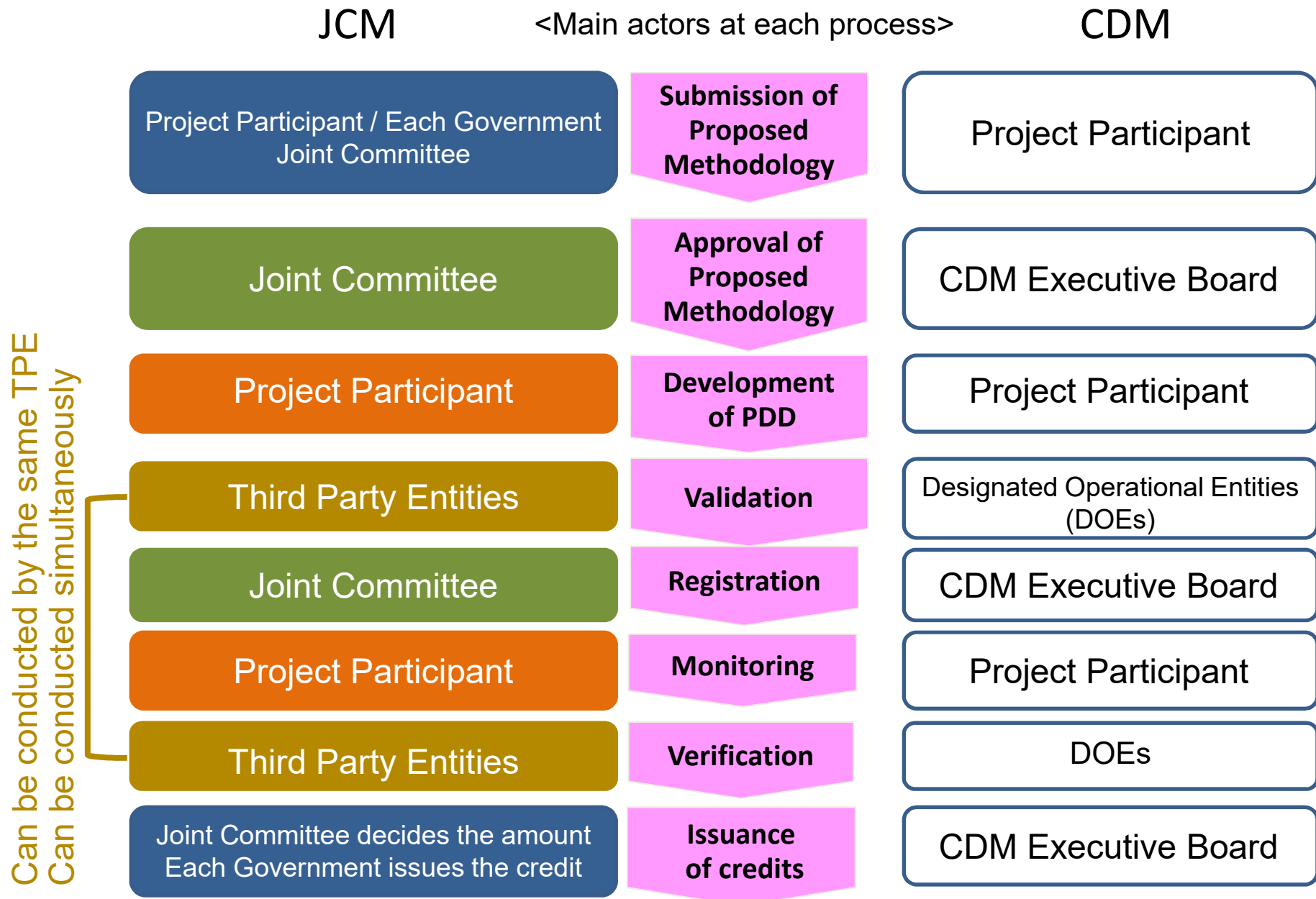
# Scheme of the JCM



## The role of the Joint Committee and each Government

- The Joint Committee (JC) consists of representatives from both Governments.
- The JC develops rules and guidelines necessary for the implementation of the JCM.
- The JC determines either to approve or reject the proposed methodologies, as well as develops JCM methodologies.
- The JC designates the third-party entities (TPEs).
- The JC decides on whether to register JCM projects which have been validated by the TPEs.
- Each Government establishes and maintains a registry.
- On the basis of notification for issuance of credits by the JC, each Government issues the notified amount of credits to its registry.

# Project Cycle of the JCM and the CDM



## 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  
(Ulaanbaatar)



Bangladesh  
Mar. 19, 2013  
(Dhaka)



Ethiopia  
May 27, 2013  
(Addis Ababa)



Kenya  
Jun. 12, 2013  
(Nairobi)



Maldives  
Jun. 29, 2013  
(Okinawa)



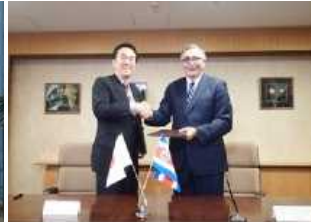
Viet Nam  
Jul. 2, 2013  
(Hanoi)



Lao PDR  
Aug. 7, 2013  
(Vientiane)



Indonesia  
Aug. 26, 2013  
(Jakarta)



Costa Rica  
Dec. 9, 2013  
(Tokyo)



Palau  
Jan. 13, 2014  
(Ngerulmud)



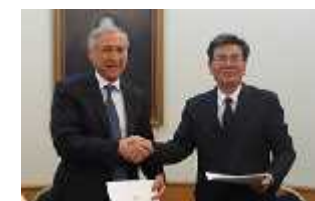
Cambodia  
Apr. 11, 2014  
(Phnom Penh)



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)



Philippines  
Jan. 12, 2017  
(Manila)

## Japan's Nationally Determined Contribution (NDC) decided March 2020(Excerpt)

On March 30, 2020, Japan decided its Nationally Determined Contribution (NDC).

### Information related to the JCM

#### Information to facilitate clarity, transparency and understanding

- The JCM is not included as a basis of the bottom-up calculation of Japan's emission reduction target, but the amount of emission reductions and removals acquired by Japan under the JCM will be appropriately counted as Japan's reduction.

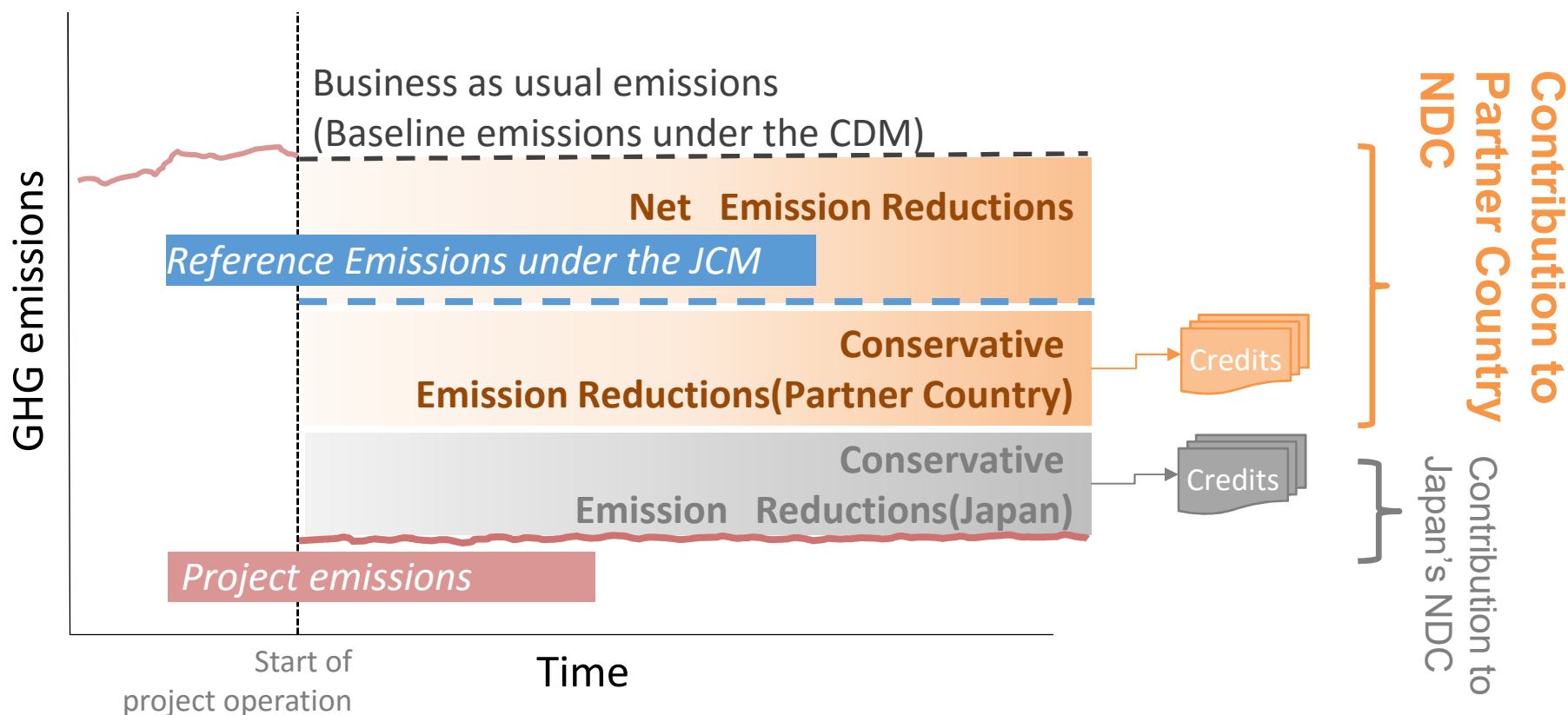
#### GHG emissions and removals, JCM and other international contributions

- Japan establishes and implements the JCM in order both to appropriately evaluate contributions from Japan to GHG emission reductions or removals in a quantitative manner achieved through the diffusion of low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions in developing countries, and to use them to achieve Japan's emission reduction target.
- Apart from contributions achieved through private-sector based projects, accumulated emission reductions or removals by FY 2030 through governmental JCM programs to be undertaken within the government's annual budget are estimated to be ranging from 50 to 100 million t-CO<sub>2</sub>.



## JCM's Contribution to NDC

- JCM's conservative emission reduction calculation (reference emissions below BaU emissions) will ensure a net decrease and/or avoidance of GHG emissions.
- This part of emission reductions will automatically contribute to the achievement of NDC.





# The JCM related Articles in the Paris Agreement

## Article 6 of the 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.

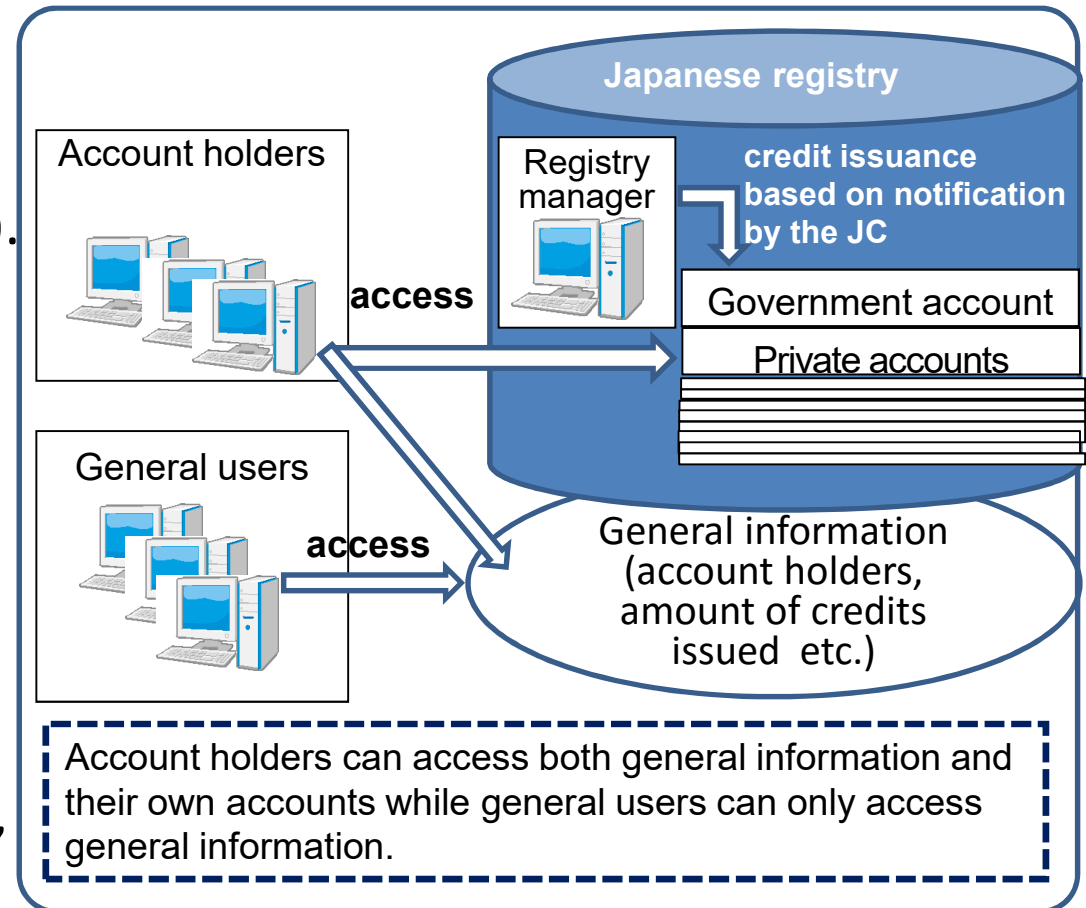
- Use of market mechanisms, including the JCM, is articulated under Article 6 which prescribes for the use of emissions reductions realized overseas towards national emissions reduction targets.
- The amount of emissions reduction and removal acquired by Japan under the JCM will be appropriately counted as Japan's reduction in accordance with the Paris Agreement.
- Japan will contribute to the development of the guidance for robust accounting including for avoidance of double counting to be adopted by the CMA\*.

\*the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

# JCM Registry

## Establishment & operation

- A registry will be established by each side (RoI (draft) para13 (b)).
- The registries need to share “Common specifications”, e.g.,
  - functions (e.g. issuance, retirement, holding, cancelation of credits)
  - account type (e.g. holding account, government holding account, cancellation account, and retirement account)
  - rules of serial number of the credit
  - information sharing
- Japan has established its registry and started operation in Nov. 2015.
- The partner countries will also establish their own registry.



# JCM Website

URL: <https://www.jcm.go.jp/>

## Contents

- General information page
- Individual JCM Partner countries-  
Japan page

## Function

- Information sharing to the public, e.g.,
  - the JC decisions,
  - rules and guidelines,
  - methodologies,
  - projects,
  - call for public inputs/comments,
  - status of TPEs, etc.
- Internal information sharing for the JC members, e.g.,
  - File sharing for electric decisions by the JC

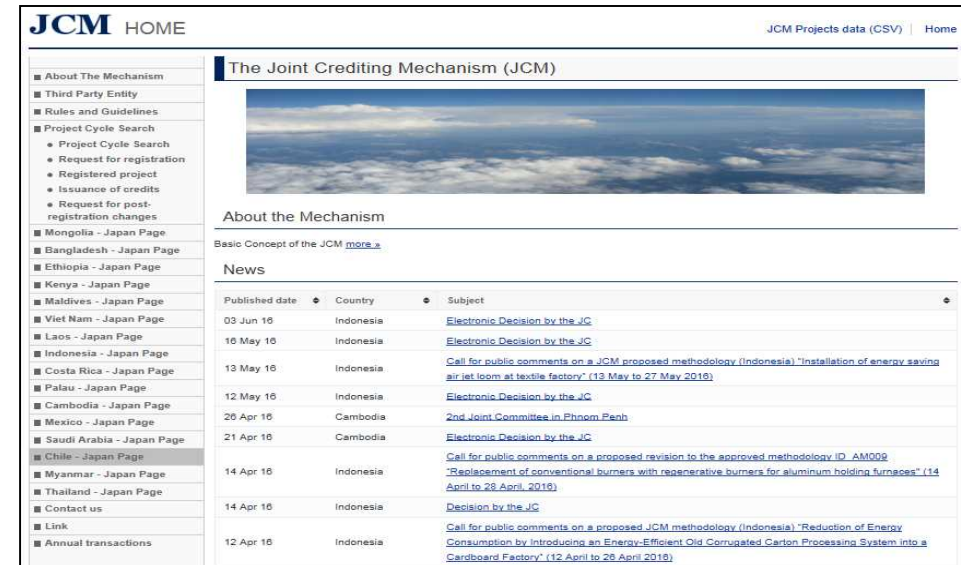


Image of the general information page



Image of the individual JCM Partner countries-Japan page

## Progress of the JCM in each partner country as of June 29, 2021

Partner country	Start from	No. of JC	No. of registered projects	No. of approved methodologies	Pipeline (JCM Financing Programme & Demonstration Projects in FY 2013-2021)
Mongolia	Jan 2013	6	5	3	9
Bangladesh	Mar 2013	4	3	3	5
Ethiopia	May 2013	4		3	1
Kenya	Jun 2013	4	2	3	3
Maldives	Jun 2013	4	1	2	3
Viet Nam	Jul 2013	8	14	15	35
Lao PDR	Aug 2013	4	1	3	6
Indonesia	Aug 2013	9	23	28	43
Costa Rica	Dec 2013	2	1	3	2
Palau	Apr 2014	5	3	1	5
Cambodia	Apr 2014	5	2	5	6
Mexico	Jul 2014	2		1	6
Saudi Arabia	May 2015	3	1	1	2
Chile	May 2015	3	1	2	5
Myanmar	Sep 2015	2	1	5	9
Thailand	Nov 2015	4	8	10	42
Philippines	Jan 2017	1		2	15
Total	17	70	66	90	197

## Programmes by Government of Japan

- ◆ JCM Demonstration Projects and JCM Financing Programme
- ◆ Feasibility Studies
- ◆ Capacity Building

# JCM Promotion Scheme by METI

## JCM Demonstration Projects

- JCM Demonstration Projects are implemented by NEDO (New Energy and Industrial Technology Development Organization), which demonstrate and verify the effectiveness of advanced, low-carbon technology with technical assistance and its GHG emission reduction effect in line with JCM rules and guidelines.
- Coverage of project cost: Cost of the Demonstration and verification of the projects  
e.g. Cost of design, production, transfer, installation of equipment, technical adviser, JCM related procedure etc.
- Eligibility for the JCM Demonstration Projects:
  - To utilize the advanced Japanese technologies utmost and be deployed widely.
  - To aim at Larger GHG emission reduction effect is expected through the diffusion of the technology introduced and demonstrated through the projects ,
  - To consist the Project Participants of entities from both countries, only the Japanese entities can apply for the Projects. The projects shall be completed within 3 years.

## JCM Feasibility Study (FS)

- The study is to develop the strategic projects which contribute to achieving GHG emission reduction at the global level through the optimization of the advanced low-carbon technology and activate the low-carbon business in line with JCM.

## MRV Application Study

- By applying MRV methodology to the facility with low-carbon technologies that have already been installed or will be installed in any JCM partner country; 1) to obtain verification by third party entity under the JCM; and 2) to conduct review and feedback on efficiency and applicability of MRV.

## Capacity Building Programmes

- Dispatching technical experts to and inviting officials from host countries in order to solve the problems they face in dissemination of low-carbon technology, etc.

## Demonstration Projects by METI\* (as of February 2021)

\* Including NEDO and UNIDO

### Mongolia:

- ★ High efficiency and low loss power transmission and distribution system (Hitachi)  
※FY2013 – Feb 2019

### Kenya:

- Rural Electrification Project for Communities by Micro Hydro Power in Kenya (NTT Data Institute of Management consulting, Inc.)  
※FY2012 – Feb 2019  
※implemented by UNIDO

### Thailand:

- IoT utilization promotion project to streamline and advance power generation assets for electric power companies in ASEAN countries (Marubeni)  
※FY Feb 2019 –
- Low-carbon Operation for Power Grid utilizing Optimized Performance Enabling Network for Volt/Var(Q) (OPENVQ)  
※FY Feb 2020 –

### Vietnam:

- ★ Energy saving by inverter air conditioner optimum operation at National Hospital (Mitsubishi Electric) ※Jan 2014 - Jun 2017
- ★ Energy saving by BEMS optimum operation at Hotel (Hibiya Engineering)  
※Jan 2014 – Feb 2018
- ★ Energy Saving and Work Efficiency Improvement Project by special LED Equipment with new technology, COB(Stanley Electric)  
※ Jan 2015 – Feb 2018

### Lao PDR:

- ★ Lao PDR Energy efficient data center(LEED) (Toyota Tsusho Corporation, Internet Initiative Japan)  
※FY2014 - Oct 2018

### Indonesia:

- Operation Optimization in Utility Facility (Azbil)  
※FY2013 – Dec 2018
- Energy Saving by Optimum Operation at Oil Refinery (Yokogawa)  
※FY2013 – Feb 2019
- The low carbonization of mobile communication's BTS (Base Transceiver Station) by the Introduction of "TRIBRID system" (KDDI)  
※FY2015 – Feb 2019

Total: 11 projects (6 countries)

- Underlined projects, one in Mongolia, three in Vietnam, one in Lao PDR, three in Indonesia, one in Kenya were registered as JCM projects.
- Projects with "★" are those which JCM credits have been issued.



# JCM Project Development & Outreach Programme by MOEJ

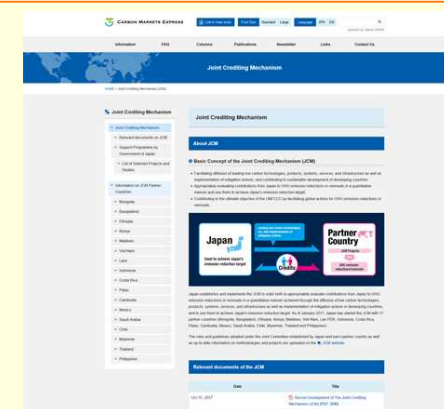
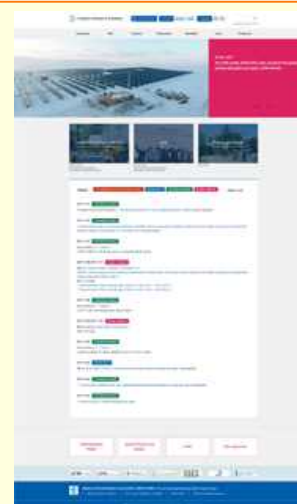
## JCM Project Development

- To **identify barriers and needs** for JCM project development in partner countries in terms of technology, financing and partnership, and **provide solutions for overcoming barriers** through consultations.
- To **enhance overall capacity for JCM implementation** through facilitating understanding on the JCM rules & guidelines, and MRV methodologies by organizing workshops, seminars, training courses and site visits.
- **JCM Business Matching Site “JCM Global Match”** provides business matching opportunities for sellers and buyers of low and zero carbon technology for the JCM project.  
<https://gec.force.com/JCMGlobalMatch/s/>



## Outreach

- **Carbon Markets Express website** provides information on the latest updates on the JCM and relevant programmes such as JCM promotion schemes by the Government of Japan.  
<https://www.carbon-markets.go.jp/eng/>
- **E-mail Newsletter** and up-to-date information are distributed regularly. To register, access:  
(for JP) <https://www.carbon-markets.go.jp/newsletter/>  
(for EN) [https://www.carbon-markets.go.jp/eng/en\\_newsletter/](https://www.carbon-markets.go.jp/eng/en_newsletter/)



CARBON MARKETS EXPRESS

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## JCM Model Projects by MOE

Budget for projects starting from FY2021 is 8.3 billion JPY (approx. USD 83 million) in total by FY2023 (including Co-Innovation)

(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 JCM credits issued

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

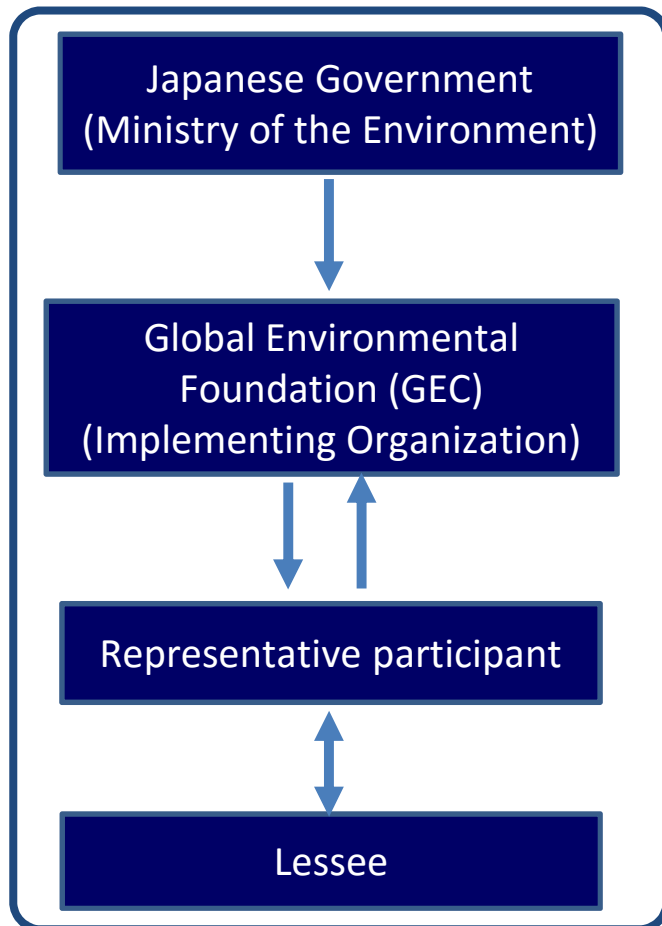


- Scope of the financing: facilities, equipment, vehicles, etc. which reduce CO<sub>2</sub> from fossil fuel combustion as well as construction cost for installing those facilities, etc.
- Eligible Projects: starting installation after financing is awarded and finishing installation within three years.

## 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



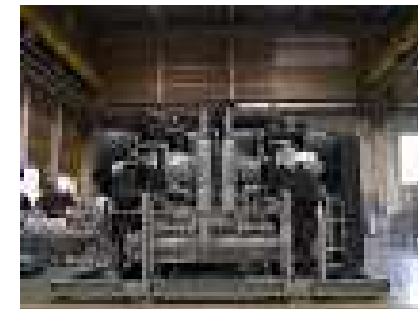
#### < Merit >

- 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

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

## Budget for FY2021

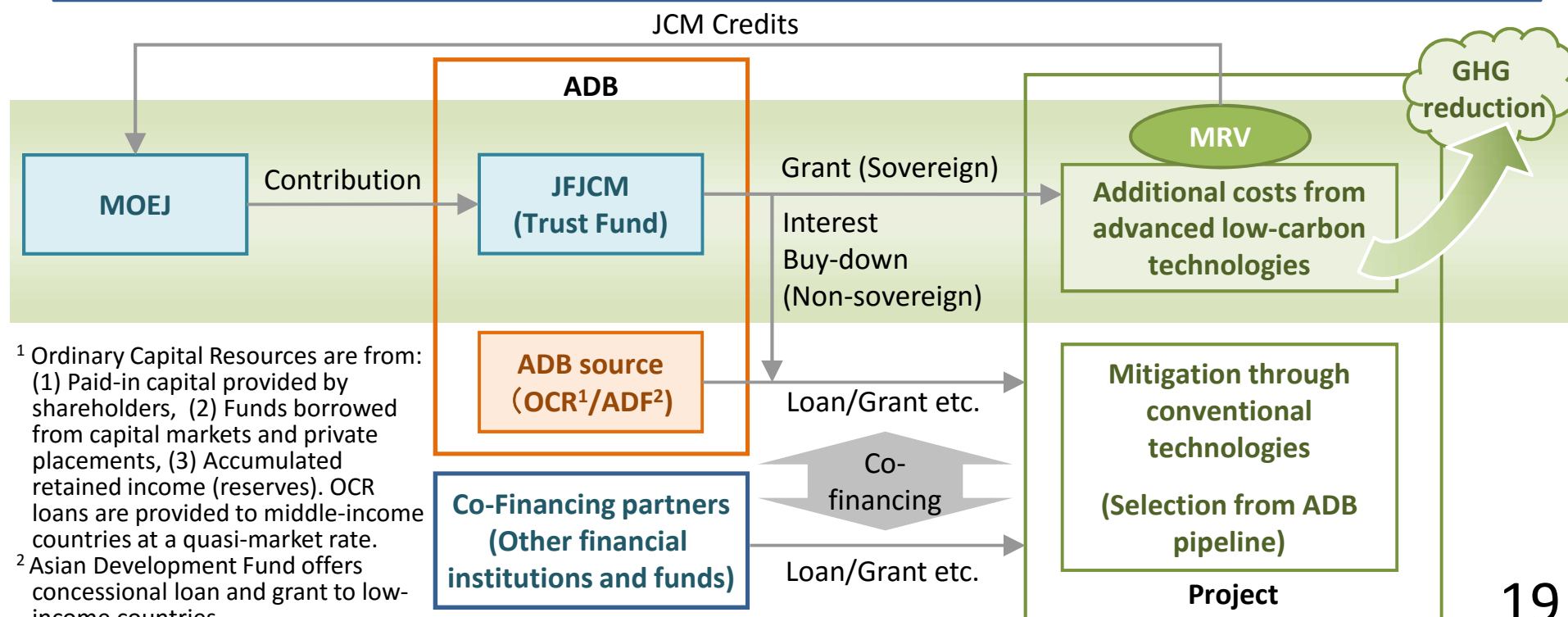
- JPY 1 billion (approx. USD 10 million)

## 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



<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.

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

【Budget for FY 2021】

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

Finance part of the cost in flat-rate  
(up to 40 million JPY/year)

Government of Japan

Conduct MRV to estimate GHG emission reductions.

At least half or the 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 maximum (Ex. 1st year for scheme, 2nd year for facilities, 3rd year for recovery/destruction)

## Eligible Projects

- After the financing is awarded, start implementation of recovery/destruction within three years
- Aim for the registration as JCM project and issuance credits



# JCM Financing Programme by MOEJ (FY2013 ~ 2020) as of June 29, 2021

## Total 186 projects (17 partner countries)

(● Model Project: 177 projects (including Eco Lease: 1 project), ■ ADB: 5 projects, ◆ REDD+: 2 projects, ▲ F-gas: 2 projects) Other 1 project in Malaysia

**115 underlined projects** have been started operation.

### Cambodia: 6 projects

- LED Street Lighting\*
- 200kW Solar PV at International School\*
- Solar PV & Centrifugal Chiller
- Inverters for Distribution Pumps
- Solar PV & Biomass Power Plant
- 1.1MW Solar PV

### Myanmar: 9 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
- 7.3MW Solar PV
- Brewing Systems and Biogas Boiler to Brewery Factory
- Energy Saving Equipment to Complex Buildings

### Bangladesh: 5 projects

- Centrifugal Chiller
- Loom at Weaving Factory\*
- 315kW PV-diesel Hybrid System\*
- Centrifugal Chiller\*
- High Efficiency Transmission Line

### Saudi Arabia: 2 projects

- Electrolyzer in Chlorine Production Plant
- 400MW Solar PV

### Maldives: 3 projects

- 186kW Solar Power on School Rooftop\*
- Smart Micro-Grid System
- Greater Male Waste to Energy Project

### Ethiopia: 1 project

- 120MW Solar PV

### Kenya: 2 projects

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

### Laos: 5 projects

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

### Thailand: 40 projects

- Energy Saving at Convenience Store
- Upgrading Air-saving Loom\*
- Centrifugal Chiller & Compressor\*
- Centrifugal Chiller in Tire Factory
- Co-generation in Motorcycle Factory
- Air Conditioning System & Chiller\*
- Refrigeration System
- Ion Exchange Membrane Electrolyzer
- Chilled Water Supply System
- LED Lighting to Sales Stores
- 2MW Solar PV1
- 12MW Waste Heat Recovery in Cement Plant
- Co-generation System PV
- 3.4MW Solar PV\*
- Refrigerator and Evaporator
- Heat Recovery Heat Pump
- 30MW Solar PV\*
- 5MW Floating Solar PV\*
- Boiler System in Rubber Belt Plant
- Air-conditioning Control System
- Biomass Co-generation System
- Co-generation in Fiber Factory
- Biomass Boiler
- 25MW Solar PV in Industrial Park
- 3.4MW Solar PV
- 0.8MW Solar PV and Centrifugal Chiller
- ▲ Introduction of Scheme for F-gas Recovery and Destruction
- 37MW Solar PV and Melting Furnace
- Heat Exchanger in Fiber Factory
- 15MW Biomass Power Plant in Sugar Factory
- 8.1MW Solar PV
- Centrifugal Chiller to Machinery Factory
- 5MW Solar PV
- 2.6MW Solar PV
- 2.5MW Solar PV with Blockchain Technology
- 2MW Solar PV2
- 30MW Floating Solar PV
- Chiller & PV
- Once-through Boiler in Garment Factory
- 1MW Solar PV on Factory Rooftop\*

**57 projects with \*** have been registered as JCM projects.

### Mongolia: 8 projects

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

### Viet Nam: 32 projects

- Digital Tachographs\*
- Amorphous transformers 1\*
- Air-conditioning in Hotel 1\*
- 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\*
- 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
- Biomass Boiler to Chemical Factory
- Air-Conditioning System and Air Cooled Chillers
- 49MW solar PV
- 57MW solar PV
- Biomass Boiler to Soluble Coffee Manufacturing Plant
- Once-through Boiler to Food Factory
- Biomass Co-generation System to Food Factory
- Air-conditioning in Hotel 2
- 2MW Solar PV
- Waste to Energy Project in Bac Ninh Province
- LED Lighting to Office Building
- 9MW Solar PV to Factories
- 10MW Rice Husk Power Plant

### Mexico: 6 projects

- 1.2MW Power Generation with Methane Gas Recovery System
- Once-through Boiler and Fuel Switching
- 20MW Solar PV
- 30MW Solar PV1
- Energy Efficient Distillation System
- 30MW Solar PV2

### Philippines: 15 projects

- 15MW Hydro Power Plant
- 1MW Rooftop Solar PV
- 1.2MW Rooftop Solar PV
- 4MW Solar PV
- 2.5MW Rice Husk Power Generation
- 18MW Solar PV
- 0.16MW Micro Hydro Power Plant
- 33MW Wind Power
- 19MW Hydro Power Plant
- 2MW Solar PV (Eco Lease)
- Biogas Power Generation and Fuel Conversion
- 29MW Binary Geothermal Power Generation
- 60MW Solar PV
- 20MW Flash Geothermal Power Plant

### 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: 40 projects

- Centrifugal Chiller at Textile Factory\*
- Refrigerants to Cold Chain Industry\*\*
- Centrifugal Chiller at Textile Factory 2\*
- 500kW Solar PV and Storage Battery\*
- 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 Plant1
- Industrial Wastewater Treatment System
- Gas Co-generation system
- CNG-Diesel Hybrid Public Bus
- Injection Molding Machine3
- 10MW Hydro Power Plant2
- 5MW Hydro Power Plant
- Thermal Oil Heater System
- 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
- Looms in Weaving Mill\*
- LED Lighting to Sales Stores
- 0.5MW Solar PV\*
- Absorption Chiller\*
- High Efficiency Autoclave
- Rehabilitation of Hydro Power Plant
- 12MW Biomass Power Plant
- 2MW Mini Hydro Power Plant
- Boiler to Carton Box Factory
- 6MW Hydro Power Plant1
- 6MW Hydro Power Plant2
- 4.2MW Solar PV
- 8MW Mini Hydro Power Plant
- 3.3MW Rooftop Solar PV

### Costa Rica: 2 projects

- 5MW Solar PV\*
- Chiller and Heat Recovery System

### Chile: 5 projects

- 1MW Rooftop Solar PV\*
- 3.4MW Rice Husk Power Generation
- 3MW Solar PV1
- 3MW Solar PV2
- 34MW Solar Power

# Reference: Technical Details for the JCM

(Subject to further consideration and discussion with partner countries)



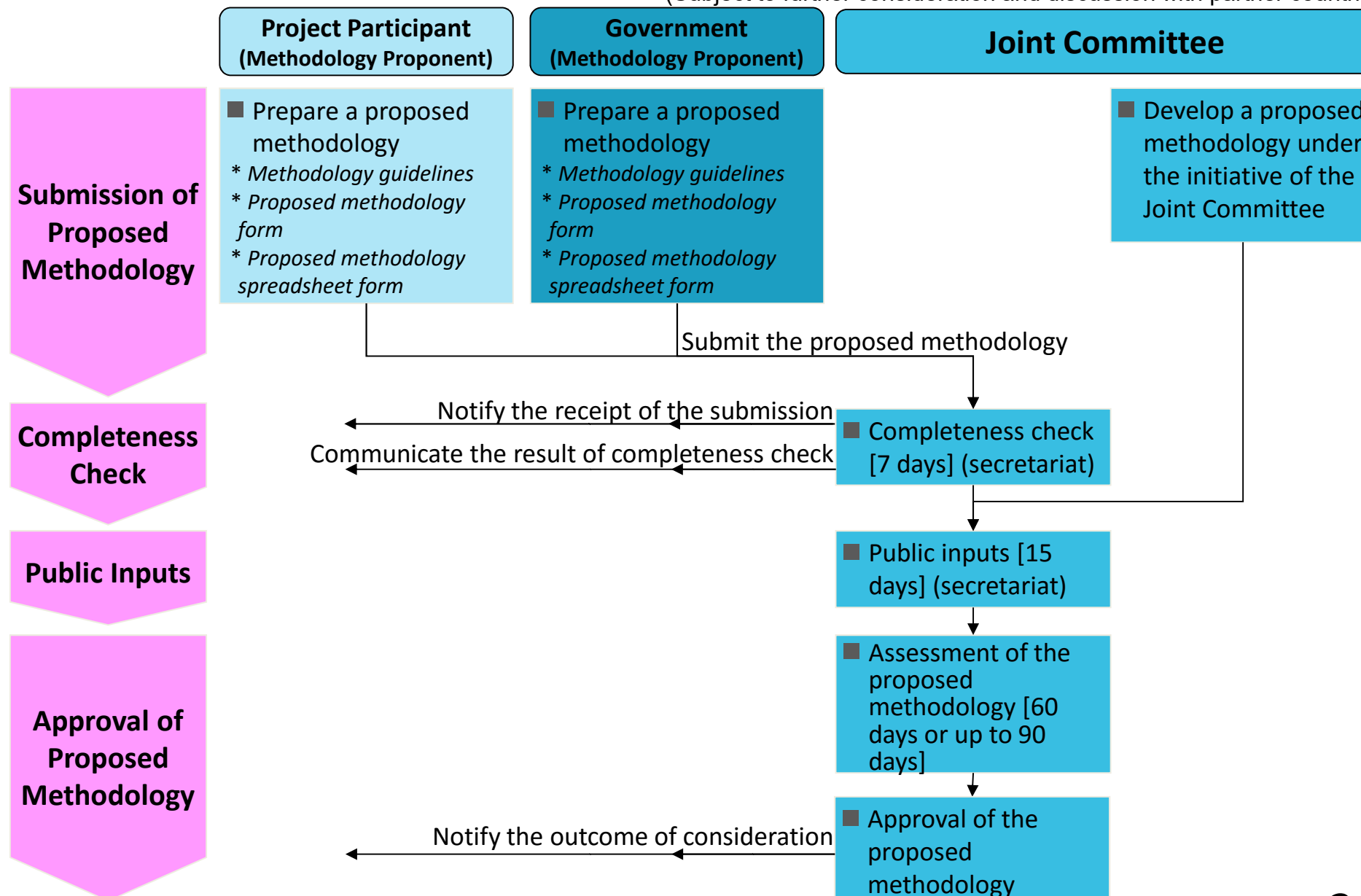
# Necessary documents for the JCM

(Subject to further consideration and discussion with partner countries)

		Rules and Guidelines
<b>Overall</b>		<ul style="list-style-type: none"> <li>✓ Rules of Implementation</li> <li>✓ Project Cycle Procedure</li> <li>✓ Glossary of Terms</li> <li>✓ Guidelines for Designation as a Third-Party Entity (TPE guidelines)</li> </ul>
<b>Joint Committee</b>		<ul style="list-style-type: none"> <li>✓ Rules of Procedures for the Joint Committee (JC rules)</li> </ul>
<b>Methodology</b>		<ul style="list-style-type: none"> <li>✓ Guidelines for Developing Proposed Methodology (methodology guidelines)</li> </ul>
<b>Project Procedures</b>	<b>Developing a PDD</b>	<ul style="list-style-type: none"> <li>✓ Guidelines for Developing Project Design Document and Monitoring Report (PDD and monitoring guidelines)</li> </ul>
	<b>Monitoring</b>	
	<b>Validation</b>	<ul style="list-style-type: none"> <li>✓ Guidelines for Validation and Verification (VV guidelines)</li> </ul>
	<b>Verification</b>	

# Methodology Development Procedure of the JCM

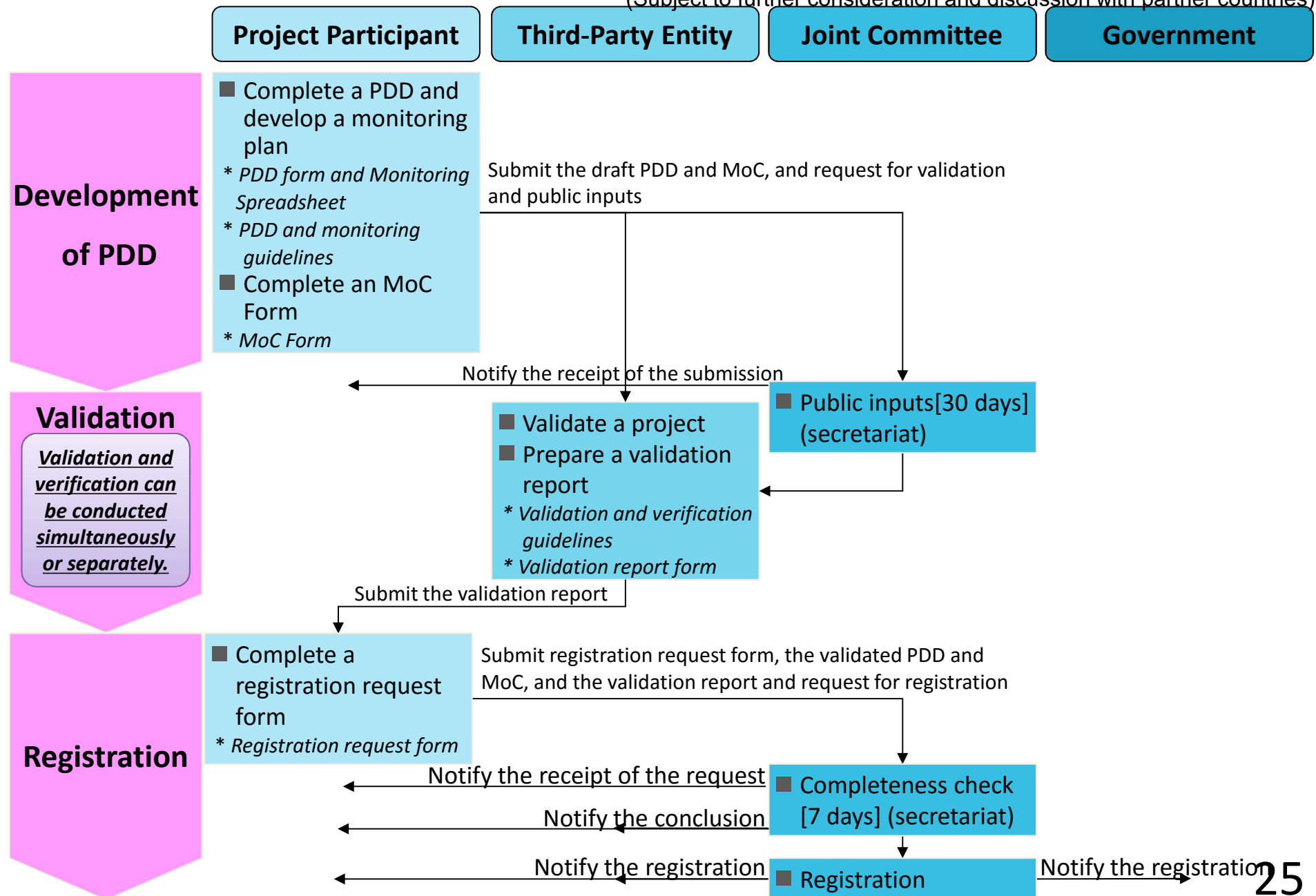
(Subject to further consideration and discussion with partner countries)



Note: Asterisk ( \* ) indicates documentation relevant for each step of the procedure

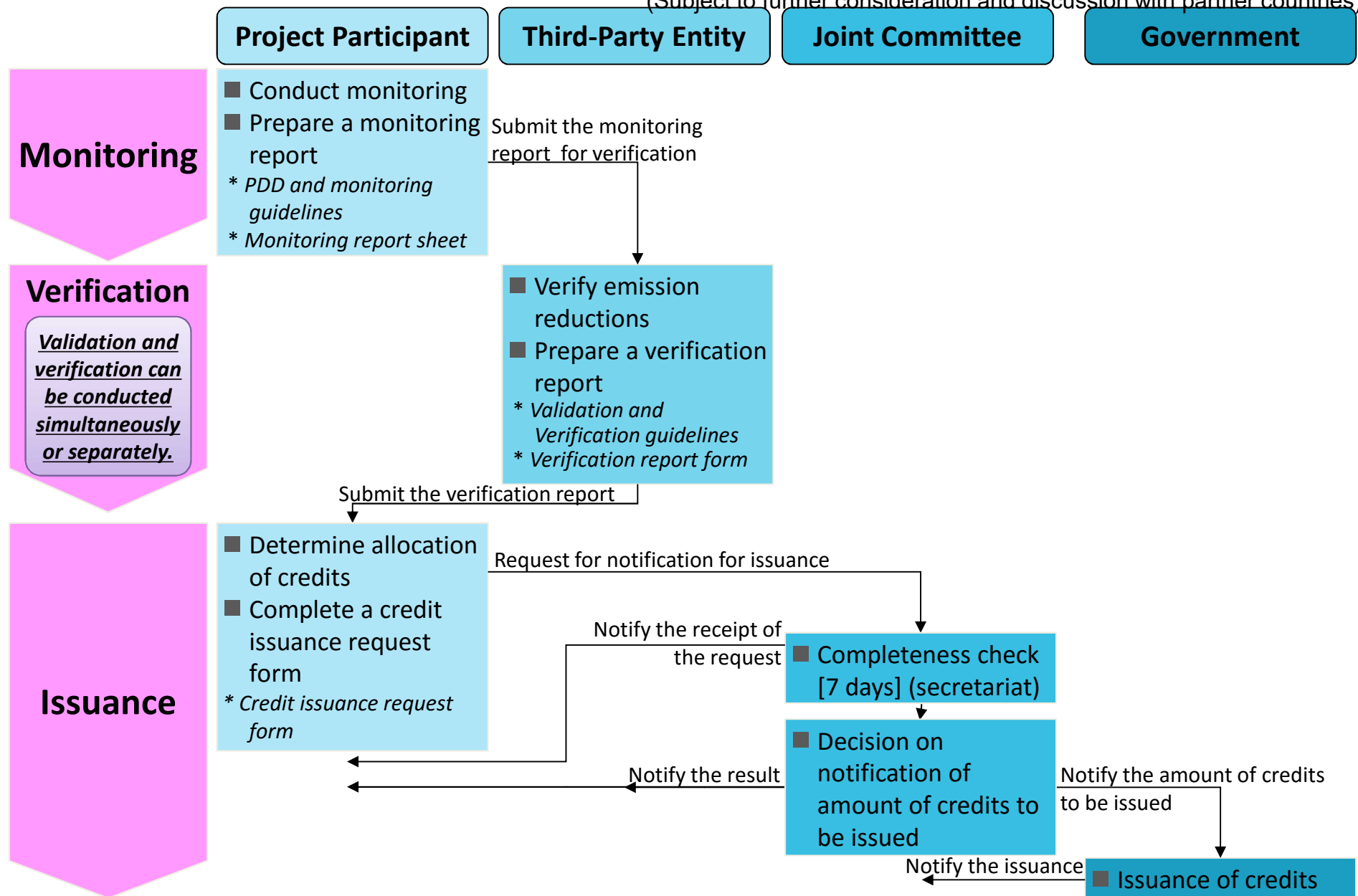
# Registration & Issuance Procedure of the JCM (1/2)

(Subject to further consideration and discussion with partner countries)



# Registration & Issuance Procedure of the JCM (2/2)

(Subject to further consideration and discussion with partner countries)



# Rules of Procedures for the Joint Committee

(Subject to further consideration and discussion with partner countries)

## Members

- The Joint Committee (JC) consists of representatives from both Governments.
- Each Government designates up to 10 members.
- The JC has two Co-chairs to be appointed by each Government (one from the partner country and the other from Japan). Each Co-Chair can designate an alternate from members of the JC.

## Decision making in the JC

- The JC meets no less than once a year and decision by the JC is adopted by consensus.
- The JC may adopt decisions by electronic means in the following procedure:
  - (a) The proposed decisions are distributed by the Co-Chairs to all members of the JC.
  - (b) The proposed decision is deemed as adopted when,
    - i) no member of the JC has provided negative assertion within [10] calendar days after distribution and both Co-Chairs have made affirmative assertion, or
    - ii) all members of the JC have made affirmative assertion.
- If a negative assertion is made by one of the JC members, the Co-Chairs take into account the opinion of the member and take appropriate actions.
- The JC may hold conference calls to assist making decisions by electronic means.

## External assistance

- The JC may establish panels and appoint external experts to assist part of its work.

**Languages:** English    **Secretariat:** The secretariat services the JC.

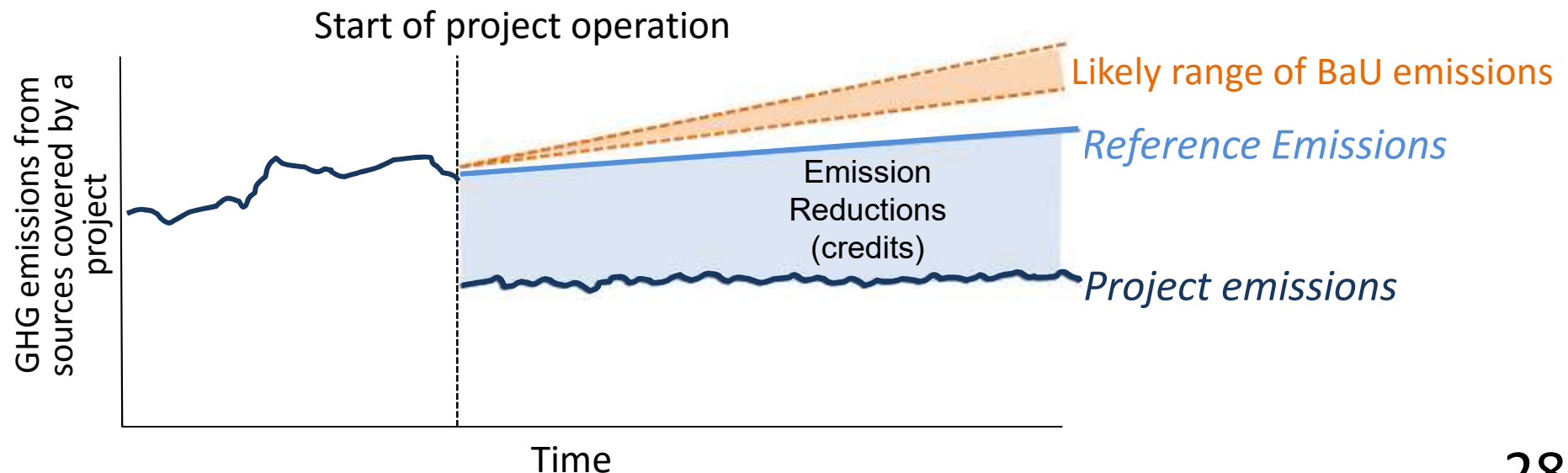
**Confidentiality:** Members of the JC, Secretariat, etc. respect confidentiality.

**Record of the meeting:** The full text of all decisions of the JC is made publicly available.

## Basic Concept for Crediting under the JCM

(Subject to further consideration and discussion with partner countries)

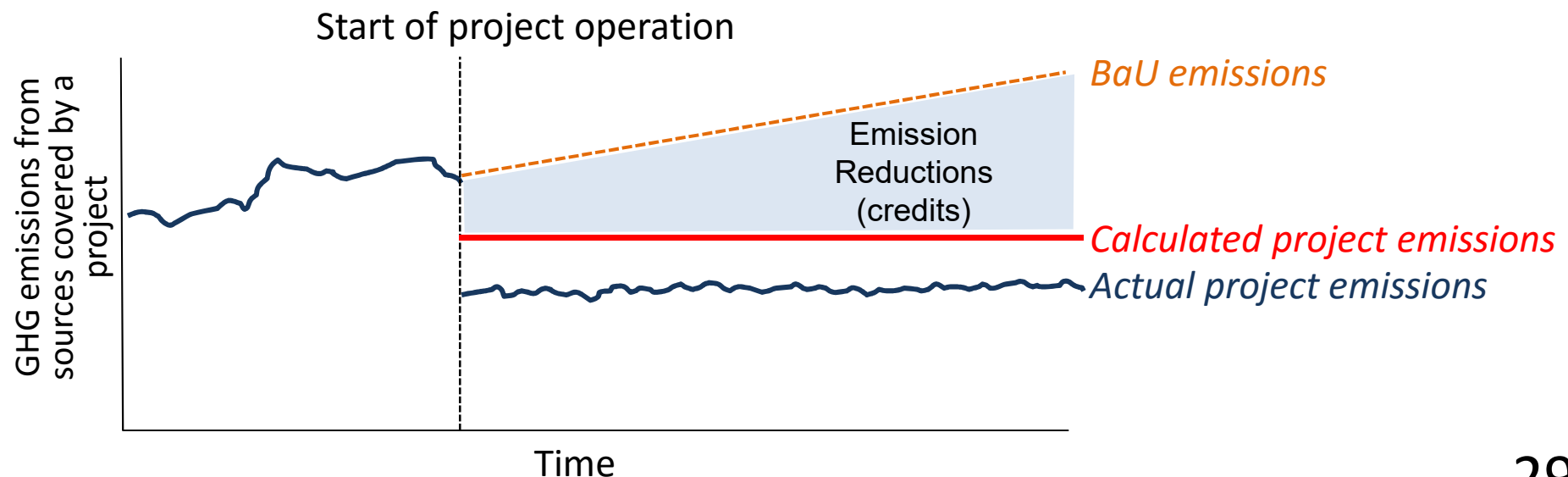
- In the JCM, emission reductions to be credited are defined as the difference between “reference emissions” and project emissions.
- The reference emissions are calculated below business-as-usual (BaU) emissions which represent plausible emissions in providing the same outputs or service level of the proposed JCM project in the partner country.
- This approach will ensure a net decrease and/or avoidance of GHG emissions.



## Addendum: ways to realize net reduction

(Subject to further consideration and discussion with partner countries)

- A net decrease and/or avoidance of GHG emissions can be realized in alternative way, instead of calculating the reference emissions below BaU emissions.
- Using conservative default values in parameters to calculate project emissions instead of measuring actual values will lead calculated project emissions larger than actual project emissions.
- This approach will also ensure a net decrease and/or avoidance of GHG emissions, as well as reduce burdens of monitoring.





## JCM Methodology

### ■ Key Features of the JCM methodology

- The JCM methodologies are designed in such a way that project participants can use them easily and verifiers can verify the data easily.
- In order to reduce monitoring burden, default values are widely used in a conservative manner.
- Eligibility criteria clearly defined in the methodology can reduce the risks of rejection of the projects proposed by project participants.

Eligibility criteria	<ul style="list-style-type: none"><li>• A “check list” will allow easy determination of eligibility of a proposed project under the JCM and applicability of JCM methodologies to the project.</li></ul>
Data (parameter)	<ul style="list-style-type: none"><li>• List of parameters will allow project participants to determine what data is necessary to calculate GHG emission reductions/removals with JCM methodologies.</li><li>• Default values for specific country and sector are provided beforehand.</li></ul>
Calculation	<ul style="list-style-type: none"><li>• Premade spreadsheets will allow GHG emission reductions/removals to be calculated automatically by inputting relevant values for parameters, in accordance with methodologies.</li></ul>

# Basic concept of Eligibility criteria in JCM methodology

(Subject to further consideration and discussion with partner countries)

Eligibility criteria in JCM methodologies contain the following:

- ✓ The requirements for the project to be registered as a JCM project. *<Basis for the assessment of validation and registration of a proposed project>*
- ✓ The requirements for the project to be able to apply the JCM methodology. *<same as “applicability condition of the methodology” under the CDM>*



1. Both Governments determine what technologies, products, etc. should be included in the eligibility criteria through the approval process of the JCM methodologies by the Joint Committee.
2. Project participants can use the list of approved JCM methodologies when applying for the JCM project registration.

Examples of eligibility criteria 1.

- Introduction of xx (products/technologies) whose design efficiency is above xx (e.g. output/kWh) *<Benchmark Approach>*
- Introduction of xx (specific high efficiency products/technologies, such as air conditioner with inverter, electric vehicles, or PV combined with battery) *<Positive List Approach>*

Examples of eligibility criteria 2.

- Existence of historical data for x year(s)
- Electricity generation by xx (e.g. PV, wind turbine) connected to the grid
- Retrofit of the existing boiler

# Overview of JCM Methodology, Monitoring Plan and Monitoring Report

(Subject to further consideration and discussion with partner countries)

## JCM methodology consists of the following:

- Approved Methodology Document
- Monitoring Spreadsheet
- Monitoring Plan Sheet (including Input Sheet & Calculation Process Sheet)
- Monitoring Structure Sheet
- Monitoring Report Sheet (including Input Sheet & Calculation Process Sheet)

### Approved Methodology Document

<p><b>1. Methodology</b></p> <p>The methodology is based on the JCM methodology document, which is approved by the JCM Secretariat. The methodology is based on the JCM methodology document, which is approved by the JCM Secretariat.</p>	<p><b>2. Monitoring</b></p> <p>The monitoring is based on the JCM methodology document, which is approved by the JCM Secretariat. The monitoring is based on the JCM methodology document, which is approved by the JCM Secretariat.</p>	<p><b>3. Reporting</b></p> <p>The reporting is based on the JCM methodology document, which is approved by the JCM Secretariat. The reporting is based on the JCM methodology document, which is approved by the JCM Secretariat.</p>
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### Monitoring Spreadsheet

Monitoring period	Monitoring point No.	Parameters	Description of data	Estimated Values	Units	Monitoring option	Source of data	Measurement methods and procedures	Monitoring frequency	Other comments
2013-2014	(1)	PO <sub>2</sub>	Project production volume at the HPFP during the period of year y	20,000	ty	Option C	monitored data	Collecting electricity consumption data with verified calibrated weighing scale and routing it to an spread sheet electronically. Verified scales are installed and they are calibrated once a year. Verification and calibration shall meet international standard on corresponding monitoring devices. Project deputy managers should check the input data with logbooks every 6 months.	once a month	
	(2)	FFC <sub>U</sub>	Project fossil fuel consumption by the HPFP	500	ty	Option B	purchase records	Collecting the purchase amount from retailer invoices and routing it to an spread sheet manually. Project deputy managers should check the input data with invoices every 6 months.	once a month	
	(3)	PEC <sub>U</sub>	Project electricity consumption by the HPFP	500	MWh/ty	Option C	monitored data	Collecting electricity consumption data with verified calibrated electricity monitoring device and routing it to an spread sheet electronically. Verified monitoring devices are installed and they are calibrated once a year. Verification and calibration shall meet international standard on corresponding monitoring devices.	continuous	

Monitoring Report Sheet

Monitoring Structure Sheet

Monitoring Plan Sheet

Cells for data & information input

# PDD and Monitoring Plan

(Subject to further consideration and discussion with partner countries)

## ■ Developing a Project Design Document (PDD) and a Monitoring Plan

- A PDD form should be filled in with information of the proposed project.
- A Monitoring Plan consists of Monitoring Plan Sheet and Monitoring Structure Sheet, and it should be filled in as well.

PDD

Monitoring Structure

Monitoring Plan

Roles and responsibilities of personnel for monitoring should be described

Cells for data input (ex ante)

Other necessary information on parameters to be monitored are:

- Monitoring options
- Source of data
- Measurement methods and procedures
- Monitoring frequency

**3.1. Summary of resources received and their considerations**

Year	Estimated resources received (USD)	Estimated resources received (USD)	Estimated resources received (USD)
2013	10,000	0.000	1.000
2014			
2015			
2016			
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**3.2. Estimated resources received in each year**

Year	Estimated resources received (USD)	Estimated resources received (USD)	Estimated resources received (USD)
2013	10,000	0.000	1.000
2014			
2015			
2016			
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2018			
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**3.3. Estimated resources received in each year**

Year	Estimated resources received (USD)	Estimated resources received (USD)	Estimated resources received (USD)
2013	10,000	0.000	1.000
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2015			
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**3.4. Estimated resources received in each year**

Year	Estimated resources received (USD)	Estimated resources received (USD)	Estimated resources received (USD)
2013	10,000	0.000	1.000
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2016			
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**3.5. Estimated resources received in each year**

Year	Estimated resources received (USD)	Estimated resources received (USD)	Estimated resources received (USD)
2013	10,000	0.000	1.000
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2015			
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## Possible Contents of the JCM PDD

### **A. Project description**

(Subject to further consideration and discussion with partner countries)

- A.1. Title of the JCM project
- A.2. General description of project and applied technologies and/or measures
- A.3. Location of project, including coordinates
- A.4. Name of project participants
- A.5. Duration
- A.6. Contribution from developed countries

### **B. Application of an approved JCM methodology(ies)**

- B.1. Selection of JCM methodology(ies)
- B.2. Explanation of how the project meets eligibility criteria of the approved methodology

### **C. Calculation of emission reductions**

- C.1. All emission sources and their associated greenhouse gases relevant to the JCM project
- C.2. Diagram showing all emission sources and monitoring points relevant to the JCM project
- C.3. Estimated emissions reductions in each year

### **D. Environmental impact assessment**

### **E. Local Stakeholder consultation**

- E.1. Solicitation of comments from local stakeholders
- E.2. Summary of comments received and their consideration

### **F. References**

### **Annex**

Approved Methodology Spreadsheet consists of Monitoring Plan Sheet, Monitoring Structure Sheet and Monitoring Report Sheet, and it shall be attached to the PDD.

# Monitoring Report

(Subject to further consideration and discussion with partner countries)

## ■ Making a Monitoring Report

- A Monitoring Report should be made by filling cells for data input (ex post) in the Monitoring Report Sheet with monitored values.
- Project participants prepare supporting documents which include evidence for values stated in the cells for data input.

**Monitoring Report**

**Monitoring period**

**Cells for data input (ex post)**

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
	Monitoring period	Monitoring point No.	Parameters	Description of data	Monitored Values	Units	Monitoring option	Source of data	Measurement methods and procedures	Monitoring frequency	Other comments
2	2013-2014	(1)	PO <sub>y</sub>	Project production volume at the HPIF during the period of year y	20,000	ty	Option C	monitored data	- Collecting electricity consumption data with verified/calibrated weighing scale and inputting it to an spread sheet electronically - Verified scales are installed and they are calibrated once a year - Verification and calibration shall meet international standard on corresponding monitoring devices - Project deputy managers double check the input data with logbooks every 6 months	once a month	
4	2013-2014	(2)	PFO <sub>y</sub>	Project fossil fuel consumption by the HPIF	500	ty	Option E	purchase records	- Collecting the purchase amount from retailer invoices and inputting it to an spread sheet manually - Project deputy managers double check the input data with invoices every 6 months	once a month	
5	N/A	(3)	PEG <sub>y</sub>	Project electricity consumption by the HPIF	500	MWh/y	Option C	monitored data	- Collecting electricity consumption data with verified/calibrated electricity monitoring devices and inputting to an spread sheet electronically - Verified monitoring devices are installed and they are calibrated once a year - Verification and calibration shall meet international standard on corresponding monitoring devices	continuous	

2. CO2 emission reductions

CO2 emission reductions	Units
22.881	100Q/y

(Monitoring option)

Option A	Based on public data which is measured by entities other than the project used: publicly recognized data such as statistical data and specific data
Option B	Based on the amount of transaction which is measured directly using metering instruments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using metering instruments (Data used: metering instruments)

Other necessary information on monitored parameters are to be filled in:

- Monitoring options
- Source of data
- Measurement methods and procedures
- Monitoring frequency