Japan's Climate Change Policy and latest development in JCM

Keitaro Tsuji
Director, Office of the Joint Crediting Mechanism and International Carbon Market,
Ministry of the Environment, Japan

21st August 2025

Ministry of the Environment

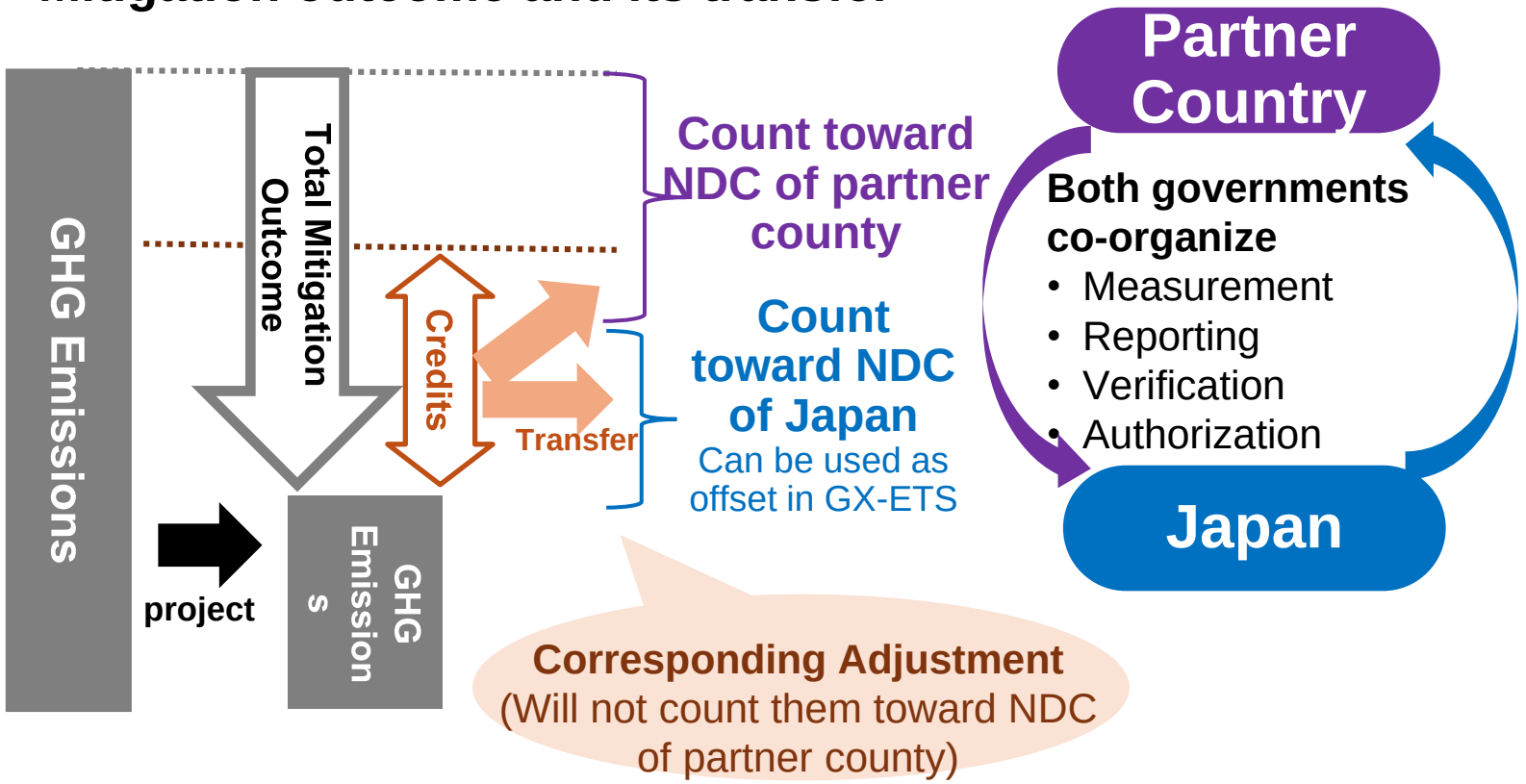
Contents

1. Overview of Joint Crediting Mechanism (JCM)

Overview of Joint Crediting Mechanism (JCM)

- **JCM is a carbon market tool** where **Japanese companies and government cooperate with mitigation activities in partner countries** (30 as of July).
- Among total mitigation outcomes, both governments **conservatively calculate, authorize and share JCM credits** between the companies/countries in proportion to their contributions, in line with **Article 6 of Paris Agreement**.
- **JCM incentivizes Japan's investment** in decarbonization projects bringing various benefits including achievement of NDC and sustainable development.

Mitigation outcome and its transfer



Decarbonization projects invested by Japan


Renewable


Energy Saving


Waste


Forestry

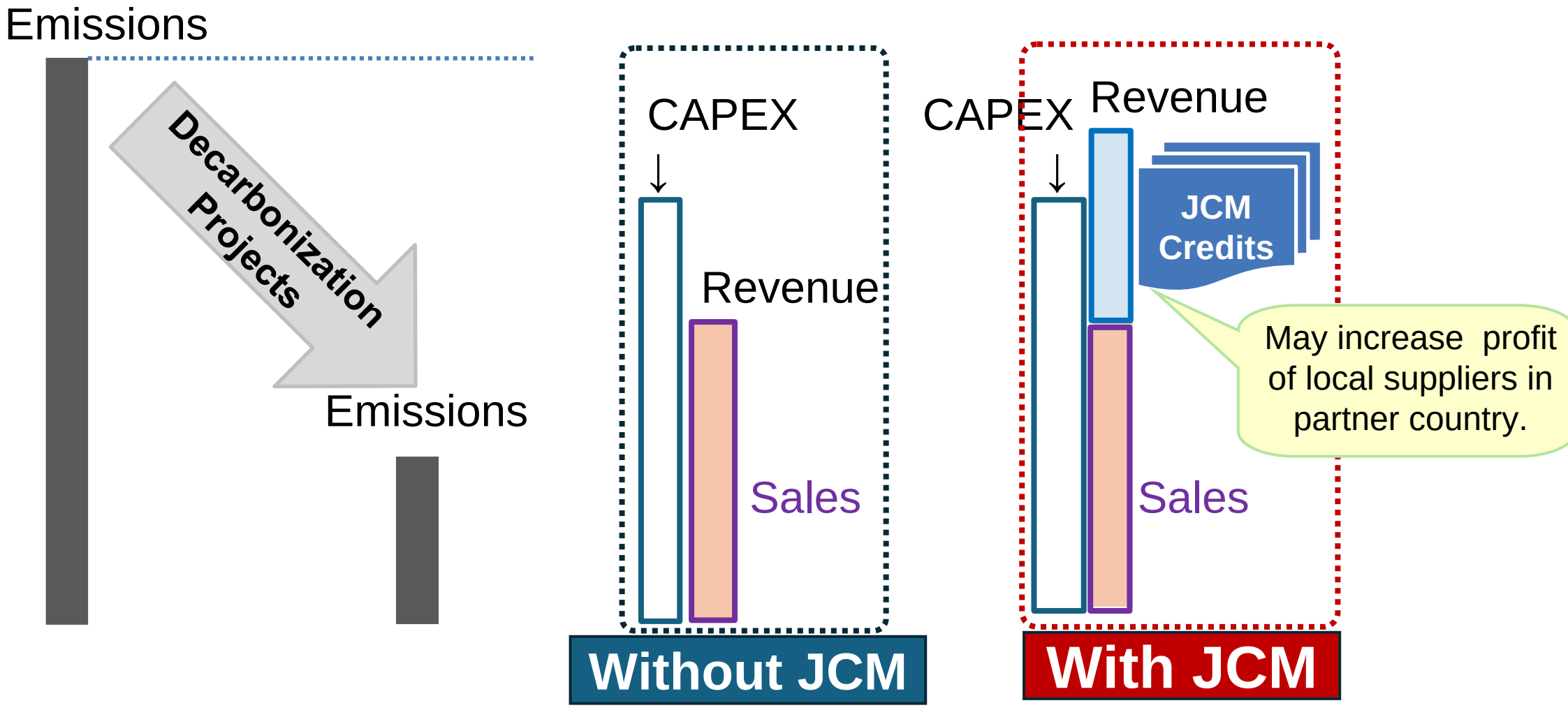

Agriculture※


CCS※

※ under development phase

JCM credit incentive works for deduction of cost

- **<u>JCM incentivizes Japan's investment</u>** in decarbonization projects bringing various benefits including
  - ➢ Deduction of price for decarbonizing material/energy in the partner country.
  - ➢ Increase of profit for supply by partner country's local suppliers.



JCM 30 partner countries and the number of projects

as of July 2025
※Numbers are in chronological order of starting the JCM

Eastern Europe

- 21. Moldova
- 29. Ukraine

East Asia, Central Asia, Caucasus

- 1. Mongolia:11 projects
- 20. Azerbaijan
- 22. Georgia
- 24. Uzbekistan
- 27. Kyrgyz: 1 project
- 28. Kazakhstan

Africa

- 3. Ethiopia
- 4. Kenya: 5 projects
- 18. Senegal: 1 project
- 19. Tunisia: 4 projects
- 30. Tanzania

Middle East

- 13. Saudi Arabia: 3 projects
- 26. UAE

Latin America

- 9. Costa Rica: 2 projects
- 12. Mexico: 5 projects
- 14. Chile: 16 projects

Southeast Asia, South Asia, Oceania

- 2. Bangladesh: 5 projects
- 5. Maldives: 4 projects
- 6. Viet Nam: 48 projects
- 7. Laos: 6 projects
- 8. Indonesia: 60 projects
- 10. Palau: 7 projects
- 11. Cambodia: 7 projects
- 15. Myanmar: 8 projects
- 16. Thailand: 54 projects
- 17. Philippines: 21 projects
- 23. Sri Lanka: 3 projects
- 25. Papua New Guinea: 1 project

More than 270 JCM projects with over 3 billion USD of investment all over the world

JCM THE JOINT CREDITING MECHANISM

Renewable Energy

Solar power, FARMLAND Co., Ltd., Chile

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

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

Biogas Power Generation, ITOCHU Corporation, Philippines

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

Energy efficiency [Consumer sector]

Energy saving at convenience stores, Panasonic, Indonesia

High-efficiency refrigerator, Mayekawa MFG, Indonesia

Energy efficiency [Industrial sector]

Optimization in petroleum refining plant, Yokogawa Electric Corp. Indonesia

Energy-saving of mobile communications base transceiver stations, KDDI Corp. Indonesia

Effective Use of Energy

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

Energy efficiency [Urban sector]

LED street lighting system with wireless network control, MinebeaMitsumi,

Amorphous transformers in power distribution, Yuko-Keiso, Vietnam

Waste

Power Generation with Methane Gas Recovery System, NTTDATA, Mexico

Waste to Energy Plant, JFE engineering, Vietnam

Transport

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

JCM projects without subsidy: 100 pipeline projects

- As of February 2025, we have approximately 100 consultations as follows.
- Quite a few projects are to reduce GHG from non-fossil fuel sources.

Others(24) 25%

Rice Paddy fields (22) 23%

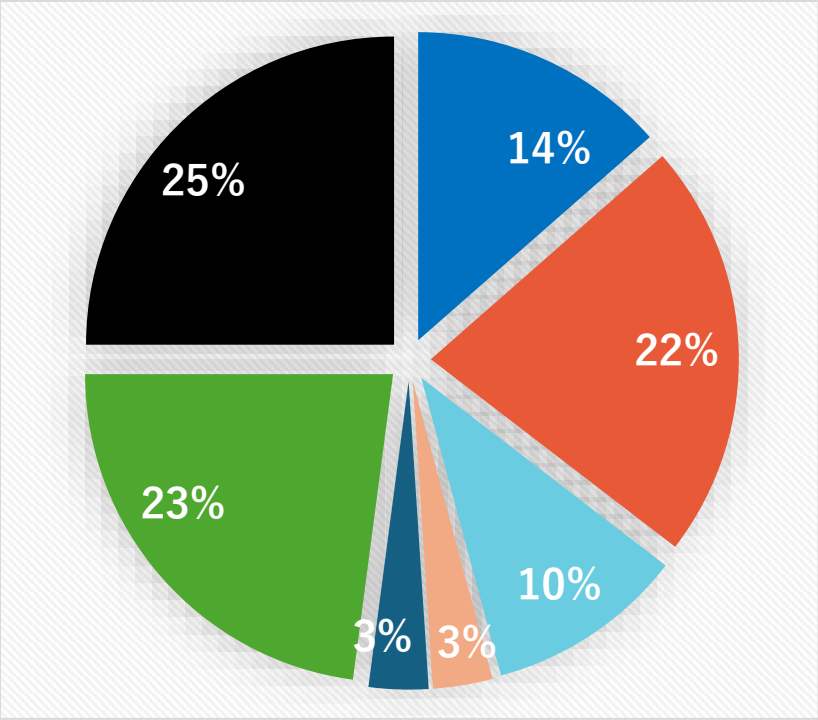
- AWD etc.

Fluorocarbon (3) 3%

- Fluorocarbon recovery and destruction

Green Carbon (3) 3%

- REDD+ etc.



Renewable Energy (13) 14%

- Solar Power Generation etc.

Energy Efficiency (21) 22%

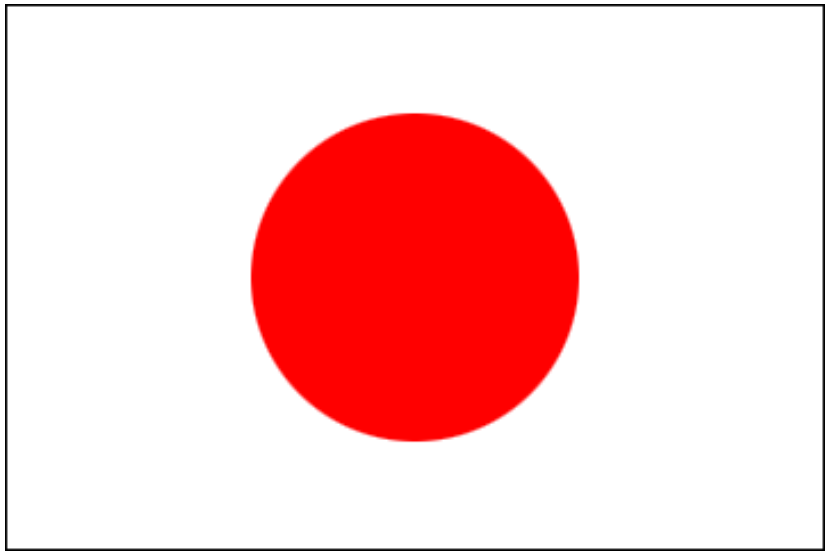
- Boiler
- LED etc.

Transport (10) 10%

- Optimization of shuttle bus
- EV etc.

2. JCM between Indonesia and Japan

Indonesia and Japan started the JCM in 2013.



60 projects are going on and contributing to sustainable development of Indonesia

Optimization in petroleum refining plant, Yokogawa Electric Corp.

PT. Semen Indonesia Tuban Plant

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

Energy Saving Equipment and Solar Power System in Senayan Square

10th JCM Joint Committee in December 2024 achieved significant milestone

Outcome of the 10th Joint Committee in December 2024

◆**Adopted the revised rules and guidelines** to implement the JCM **consistent with Article 6**

⇒ Important **prerequisite for international transfer of JCM credits was fulfilled**.

◆**Adopted the guidelines to implement Carbon Capture and Storage and Carbon Capture, Utilization and Storage (CCS and CCUS)** projects under the JCM.

◆ Decided the issuance of the credits from the power generation by waste heat recovery in a cement factory

◆ Decided to register 8 proposed projects

◆ Approved 7 JCM methodologies

◆ Decided to designate 6 entities as TPE

Mutual Recognition Arrangement (MRA) on JCM and SPEI was signed in October 2024

- Mutually recognize JCM (mechanism between Japan and Indonesia) and SPEI (Indonesia's domestic GHG emission reduction certification)
- MRA highlights the several sectors (i.e., **forestry and other land-use (FOLU)** and **waste**)
- How to implement MRA is on-going coordination between Indonesia and Japan.

Legok Nangka Waste-to-Energy PPP Project in West Java

Current condition at Sarimukti Landfill (2024)

Sarimukti Landfill fire (August 2023)

Sustainable Peatland Management Project in West Kalimantan by Sumitomo Forestry

3. JCM in line with Article 6 of the Paris Agreement

JCM is consistent with Paris Agreement

- JCM is consistent with Article 6 of the Paris Agreement

1. **Conservative calculation of credits** using reference emissions below BaU emissions
2. Both countries **authorize international transfer and use of JCM credits**
3. **Avoid double counting** by corresponding adjustments
4. Evaluate contribution to sustainable development
5. **Reporting to UNFCCC**

[Reference]Key decisions on Article 6

- Emission reduction evaluation for **conservative reference emissions** through **below 'business as usual (BaU)'** is required to ensure environmental integrity
- Based on the Glasgow guidance (2/CMA.3), **Participating Parties shall explain in Article 6 reporting for each cooperative approach.**

2/CMA3., annex, para 18. (Initial report)

18. Each participating Party shall submit an Article 6, paragraph 2, **initial report** (hereinafter referred to as an initial report) no later than authorization of ITMOs from a cooperative approach or where practical (in the view of the participating Party) in conjunction with the next biennial transparency report due pursuant to decision 18/CMA.1 for the period of NDC implementation. The initial report shall contain comprehensive information to:

(h) Ensures environmental integrity, including:

(ii) Through robust, transparent governance and the quality of **mitigation outcomes**, including through **conservative reference levels**, baselines set in a conservative way and **below 'business as usual' emission projections** (including by taking into account all existing policies and addressing uncertainties in quantification and potential leakage);

2/CMA3., annex, para 22. (Regular information)

22. Each participating Party shall also include, as **an annex to its biennial transparency reports** that are submitted in accordance with paragraph 10(b) of the annex to decision 18/CMA.1 and no later than 31 December of the relevant year, the following information on how each cooperative approach in which it participates:

(b) Ensures environmental integrity, including:

(ii) Through robust, transparent governance and the quality of **mitigation outcomes**, including through **conservative reference levels**, baselines set in a conservative way and **below 'business as usual' emission projections** (including by taking into account all existing policies and addressing uncertainties in quantification and potential leakage);;

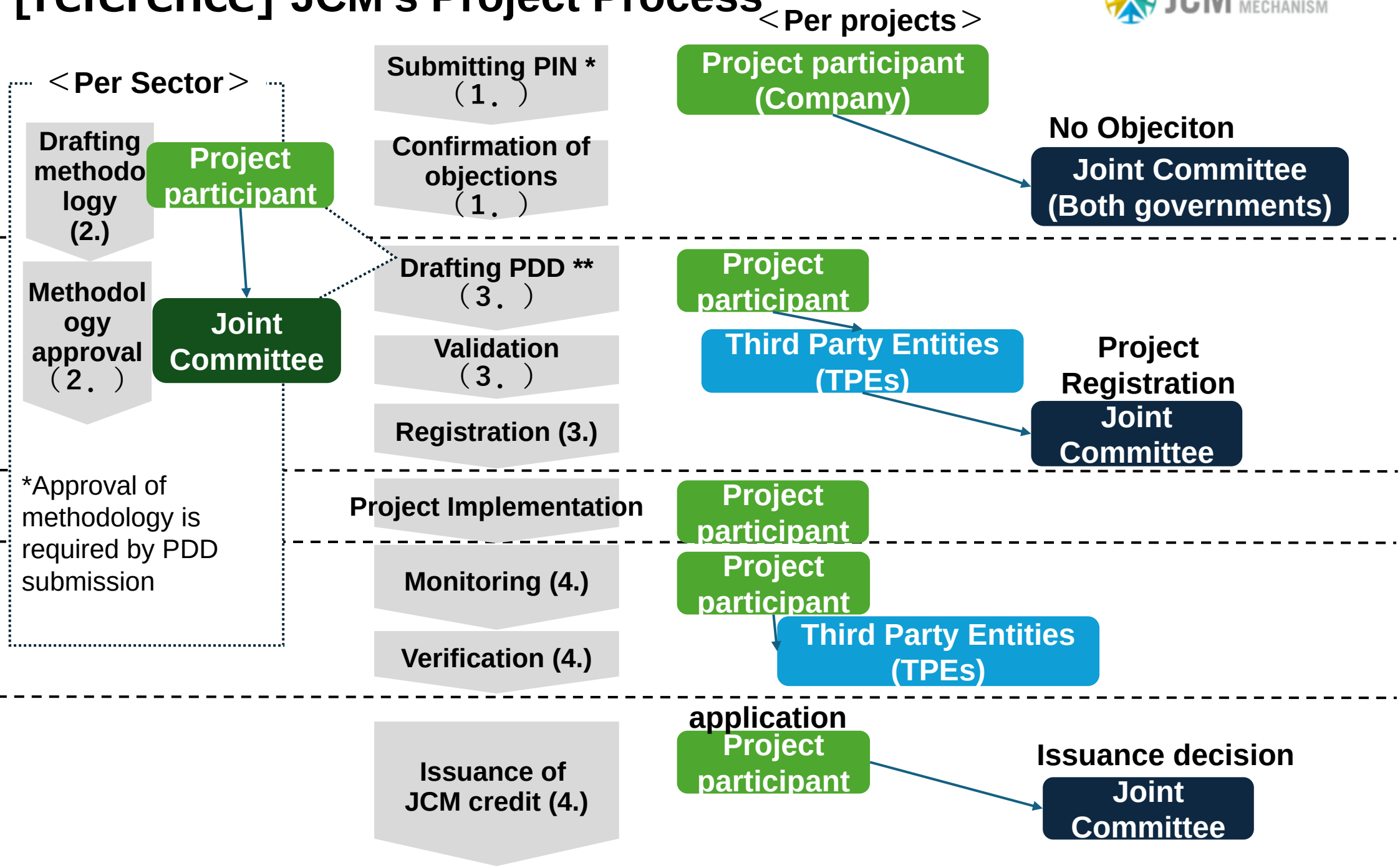
Important prerequisite for international transfer of the JCM credit was fulfilled

NEW

In December 2024, Indonesia and Japan **adopted revised JCM rules and guidelines** to operationalize the JCM consistent with Article 6 that enable us to authorize JCM credits as ITMOs (Internationally Transferred Mitigation Outcomes).

1. Crediting period
   (e.g. fixed 10 years, or renewable 5 years, max 15 years)
2. Guidelines for SDIP and SDIR *A6 related
   =Sustainable Development Implementation Plan and Report
3. **Project Idea Note (PIN)**
4. Decision on credit allocation at the project registration
5. **Authorization** *A6 related
6. **Reference emissions** taking into account the **latest NDC** of Indonesia *A6 related
7. The latest ISO (14064-2, 14064-3 and 14065)

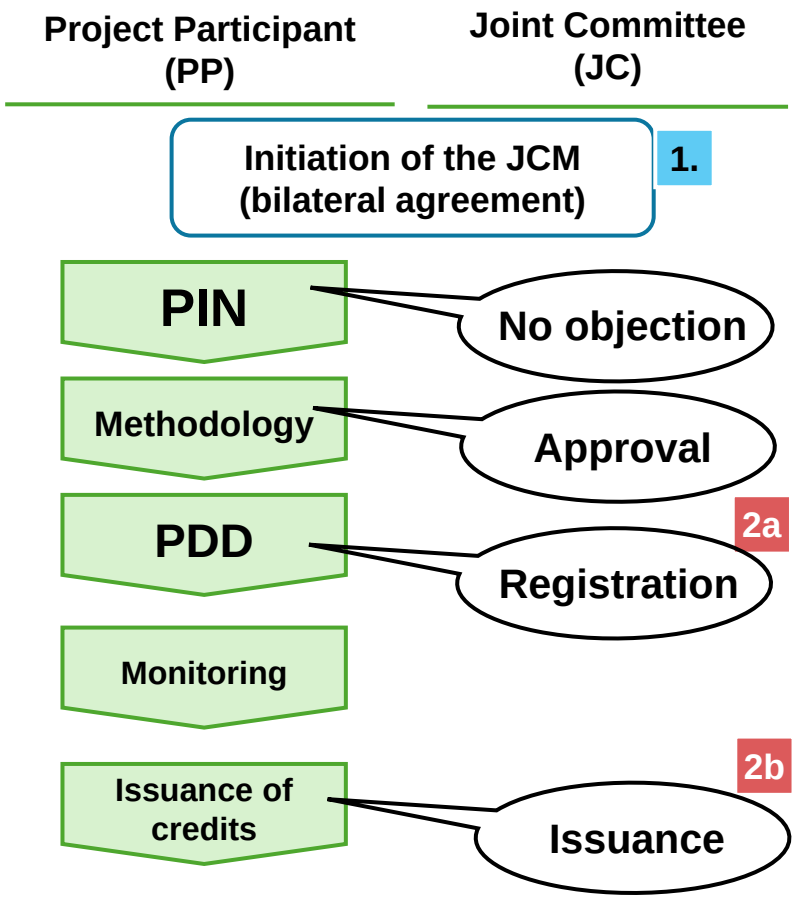
[reference] JCM's Project Process



*** PIN (Project Idea Note):** Explains the outline of the project.
** **PDD (Project Design Document)**: Includes monitoring methods and estimated emission reductions. Required for project registration.

[reference] Authorization of JCM credits can be simple

- "Authorization" is an act by both governments of **authorizing the use of ITMOs from a cooperative approach** (e.g., JCM) as stipulated in the Paris Agreement.
- Japan proposes efficient **authorization arrangements to enhance foreseeability** for private companies as **JCM cycle covers careful examination** enough for A6 authorization



1. Authorization of JCM as a cooperative approach	
What	Authorization of JCM, incl authorization process
When	At the time of signing of MoC
Report	Copy of authorization attached to an initial report

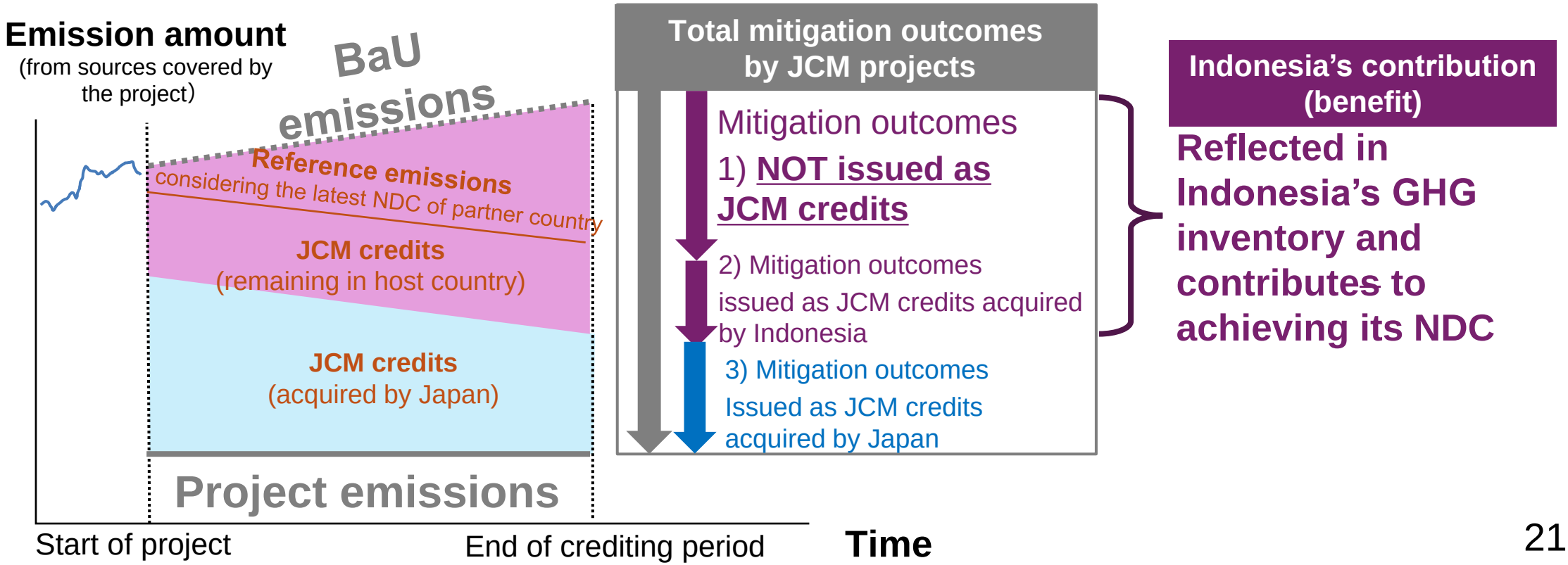
2a. Authorization of estimated ITMOs from each project	
What	the expected quantity of ITMOs, entities, etc.
When	At the time of project registration
Report	Attachment to the 1. authorization

2b. Authorization of final quantity of ITMOs	
What	Confirmation of final quantity of ITMOs and period already authorized at 2a. Authorization
When	At the time of issuance of JCM credits
Report	Attachment to the 1. authorization

4. Sharing of Mitigation Outcome

1. Total mitigation outcomes by JCM projects

- **Total mitigation outcomes by JCM projects** are the difference between BaU and project emissions, consisting of
  - **1) NOT issued as JCM credits**
  - Issued as JCM credits acquired by 2) Indonesia and 3) Japan
- Mitigation outcomes 1) NOT issued as JCM credits and 2) issued as JCM credits acquired by Indonesia will be **reflected in Indonesia's GHG inventory and contribute to achieving its NDC**

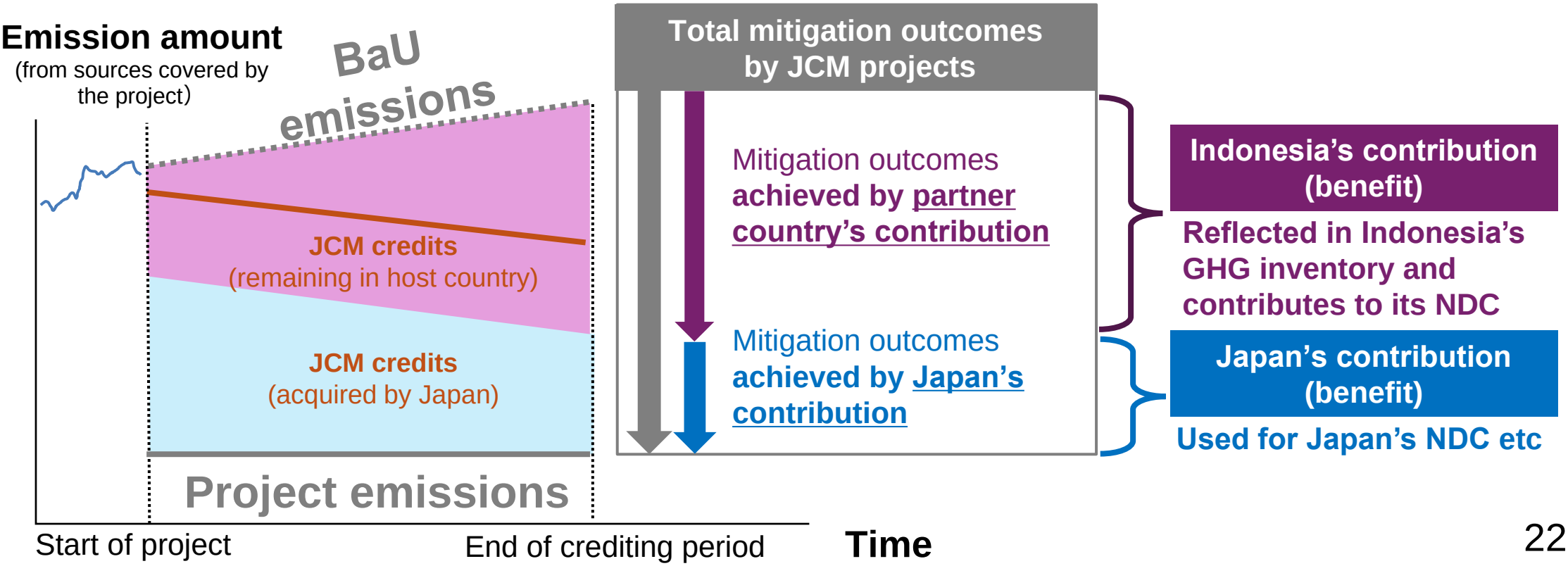


2. Allocation of mitigation outcomes

- **Allocation of mitigation outcomes by each government and project participants** will be decided by Joint Committee, taking into consideration their **respective contributions to the JCM project**.

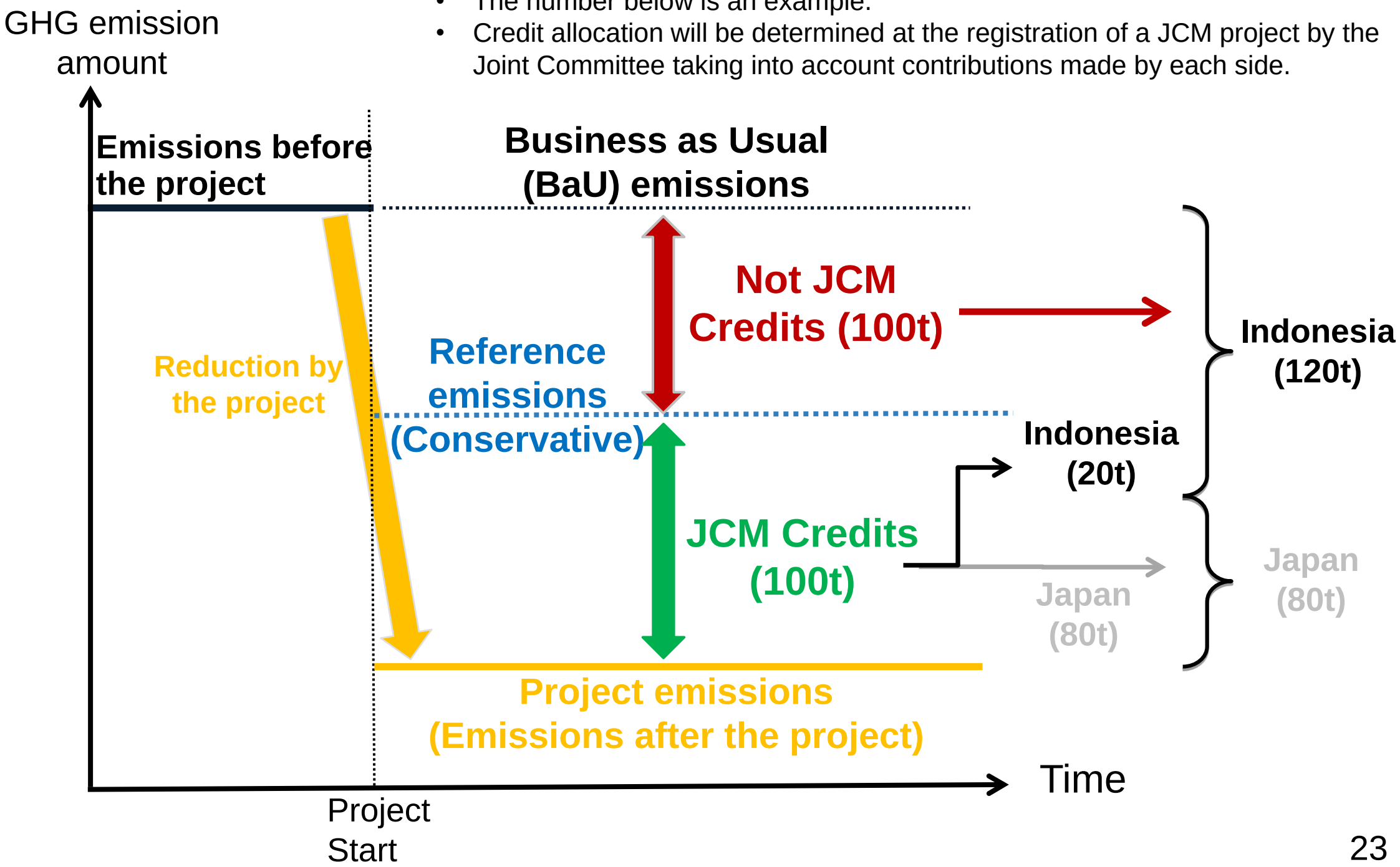
  <Examples of contribution>

  - **Private and public financial contributions**
  - In-kind contributions, such as **technical and operational contributions**.



[reference] Example of benefit sharing between partner Indonesia and Japan

- The number below is an example.
- Credit allocation will be determined at the registration of a JCM project by the Joint Committee taking into account contributions made by each side.



5. Japan’s recent policy development to accelerate JCM

1. Japan has submitted new NDC in Feb 2025

NEW

Through JCM, Japan aims to contribute to reduction of

- **100 million ton-CO2 in 2030 and**
- **200 million ton-CO2 in 2040**

*Accumulated

Japan's Nationally Determined Contribution (NDC) 18th February 2025

(g) The intention to use voluntary cooperation under Article 6 of the Paris Agreement

Japan will establish and implement the Joint Crediting Mechanism (JCM) in order to quantitatively evaluate the contributions of Japan to greenhouse gas emission reductions and removals which are achieved through the diffusion of, among others, decarbonizing technologies, products, systems, services, and infrastructures as well as through the implementation of measures in global south countries and others, and to use such contributions to achieve Japan's NDC. With these efforts, through public-private collaborations, Japan aims to secure accumulated emission reductions and removals at the level of approximately 100 million t-CO2 by FY 2030 and approximately 200 million t-CO2 by FY 2040. Japan will appropriately count the acquired credits to achieve its NDC.

2. JCM Agency (JCMA) has started operation

NEW

The Government of Japan launched <u>new agency covering ALL the operation of JCM</u> in April 2025

- *One stop focal point on behalf of Japanese government to implement and facilitate the JCM*

6. Japan’s domestic compliance market

Japan will launch domestic compliance market in 2026

NEW

GX-ETS will start in April 2026

- **Mandatory ETS (Emission Trading Scheme)**
  - 300-400 companies, covering 60% of Japan's total emissions
- **Can use JCM credit as compliance credits**

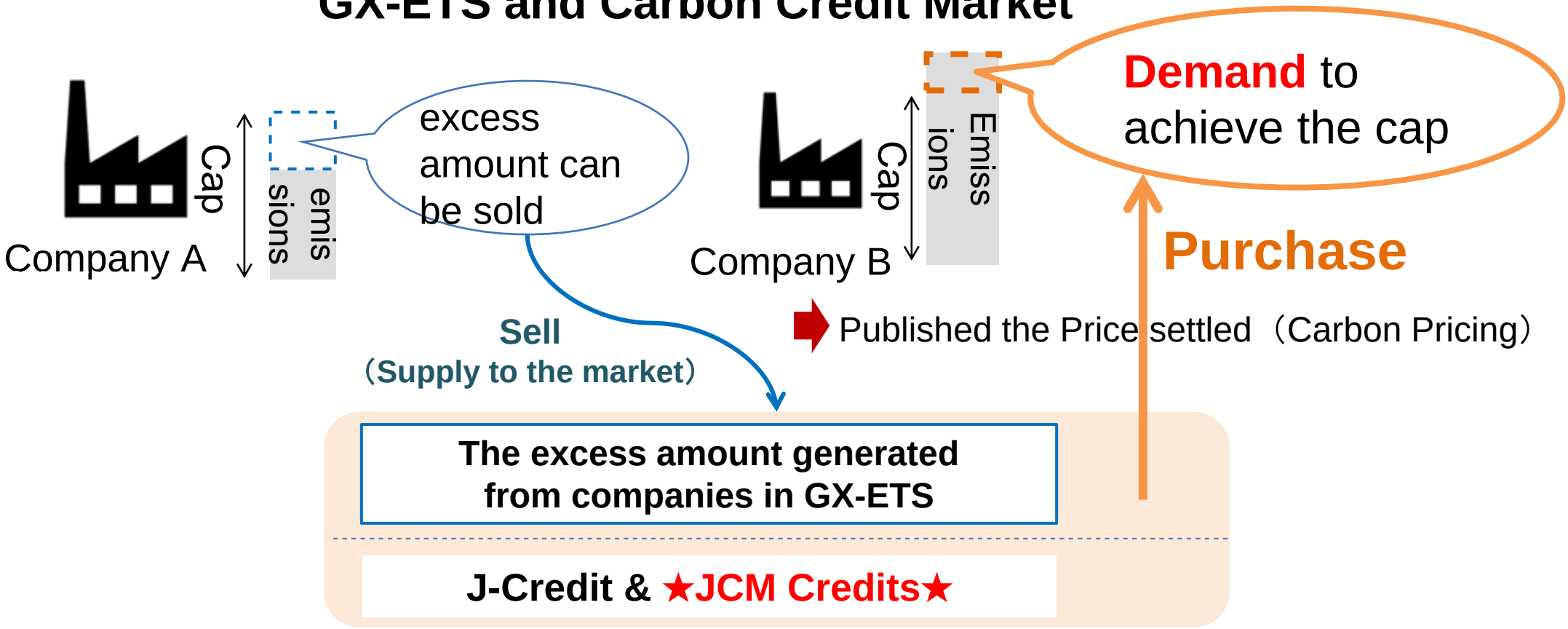
Creating huge demand for JCM

[reference] JCM Credits acquired by Japan is used for achievement of emission reduction target (cap)

NEW

- JCM credits acquired by Japan can be
  - ➢ counted toward achievement of NDCs.
  - ➢ used **for the achievement of companies' compliance targets (caps) under GX-ETS**

GX-ETS and Carbon Credit Market



7. Support programs by Japanese Government

Support programs /menues by Japanese Government

	Program / Menu	Type of support
Ministry of the Environment	Subsidy Program for the JCM Facility Introduction	Subsidy
	Japan Fund for the JCM (JF JCM) - managed by ADB	Grant
	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

Subsidy Program for the JCM Facility Introduction by MOEJ

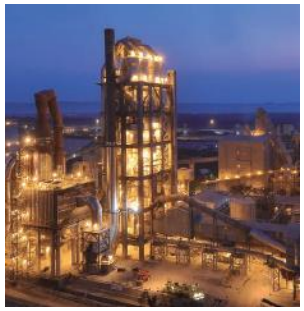
Budget in 2025
USD 76 million
(≒11 billion JPY)

Government of Japan

Subsidy for CAPEX (up to half)

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_2 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.

METI's support for the JCM demonstration project

- Ministry of Economy, Trade and Industry Japan (METI) supports the introduction of advanced decarbonizing technologies though Demonstration Projects which contribute to the decarbonization of the JCM partner countries.
- The project cost burdened by Japanese side is 100% supported by Japanese government (METI/NEDO).

Examples of past projects

Optimization in petroleum refining plant, Yokogawa Electric Corp. Indonesia

Energy-saving of mobile communications base transceiver stations, KDDI Corp. Indonesia

Total: 11 projects in 6 countries (As of April 2025)

JCM Feasibility Study by METI

Scope:

- Consider basic elements of the demonstration (technology, project site, stakeholders, etc.)
- Establish the basis of JCM methodology for quantification of the GHG emission reduction
- Study the possibility of dissemination of the introduced technology
- Project cost: 15 million JPY (approx.103 thousand USD) per study

Project period: Up to 1 year

Assumed technical areas: Energy efficiency with IoT, EMS, Renewable energy, CCS/CCUS, Hydrogen/Ammonia, etc.

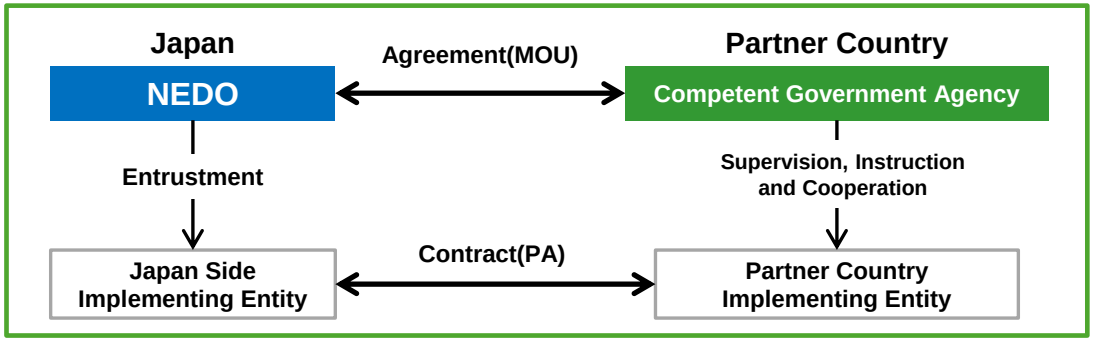
JCM Demonstration Program by NEDO (*)

Scope:

Demonstrate and verify the effectiveness of advanced decarbonizing technology:

- Introduction of relevant facilities and systems, and conduct demonstration
- Quantification of GHG emission reduction effectiveness
- JCM procedure toward issuance of JCM credits
- Budget for FY 2025: 1.2 billion JPY (approx. 8.3 million USD)

Project period: Pre-demonstration stage: up to 1 year
Demonstration stage: up to 3 year
Follow-Up Project stage: up to 2 year



* NEDO = New Energy and Industrial Technology Development Organization

Key Messages

JCM for Indonesia and Japan

1. **Both governments cooperate to speed up/scale up JCM project development to stimulate more investment beneficial for Indonesia and Japan.**
2. **JCM can be a leading example for carbon market development in Indonesia with the Mutual Recognition Arrangement (MRA).**

- **JCM's tangible benefits to Indonesia are contributions to NDC and sustainable development** with decarbonization technology.
  = JCM credits acquired by Japan are only a part of total emission reductions and the rest contributes to Indonesia's NDC

- **JCM facilitates 60 decarbonized projects** in Indonesia, inviting **private investment & private sector participation** utilizing subsidies.

- Indonesia and Japan work closely to **build best-practices in carbon markets** while materializing the MRA.