

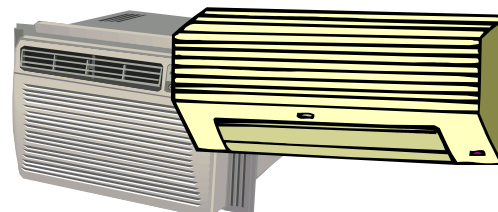
# Recent Development of The Joint Crediting Mechanism (JCM)

September 2013  
Government of Japan

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

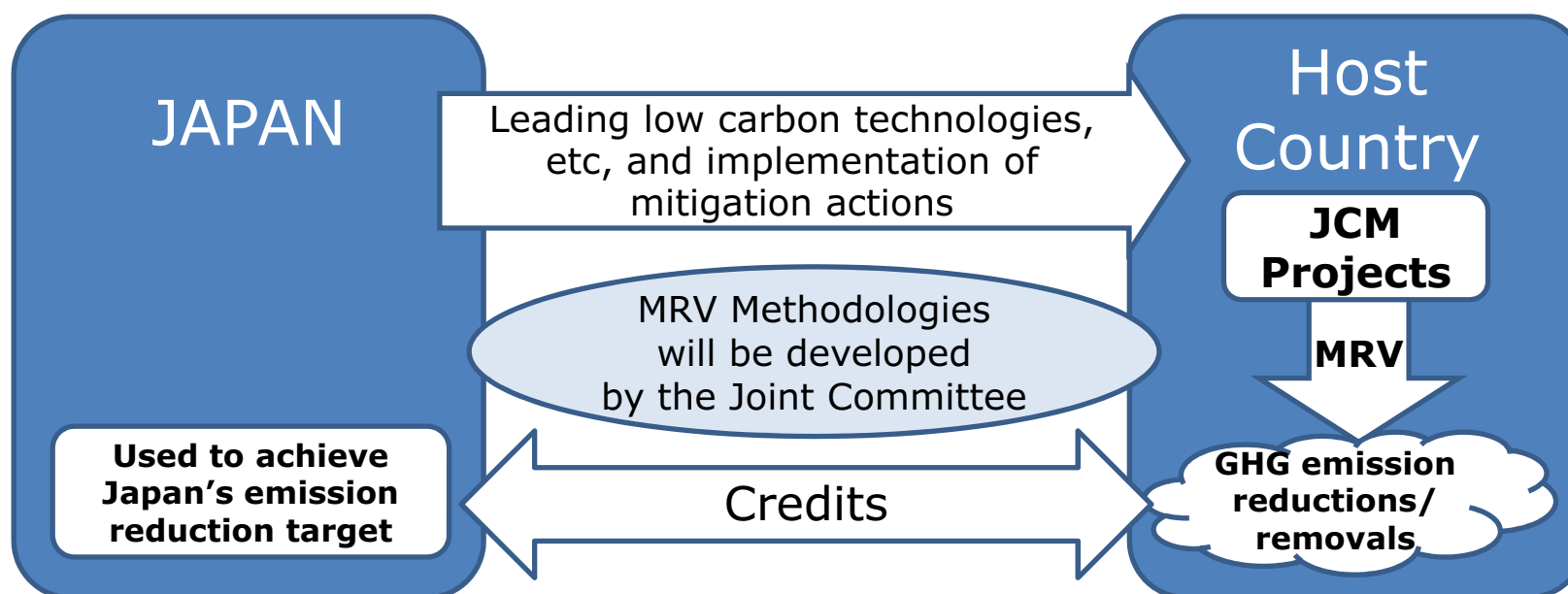
# Low-Carbon Growth

- In order to effectively address the issue of climate change, it is necessary for both developed and developing countries to achieve low-carbon growth all around the world by fully mobilizing technology, markets and finance.
- Widespread use of advanced low-carbon technologies and products in various fields including renewable energy, highly efficient power generation, home electronics, low-emission vehicles, and energy-savings in factories must be accelerated.
- Realizing a low carbon society by combining these technologies and products with appropriate systems, services, and infrastructure is also crucial.

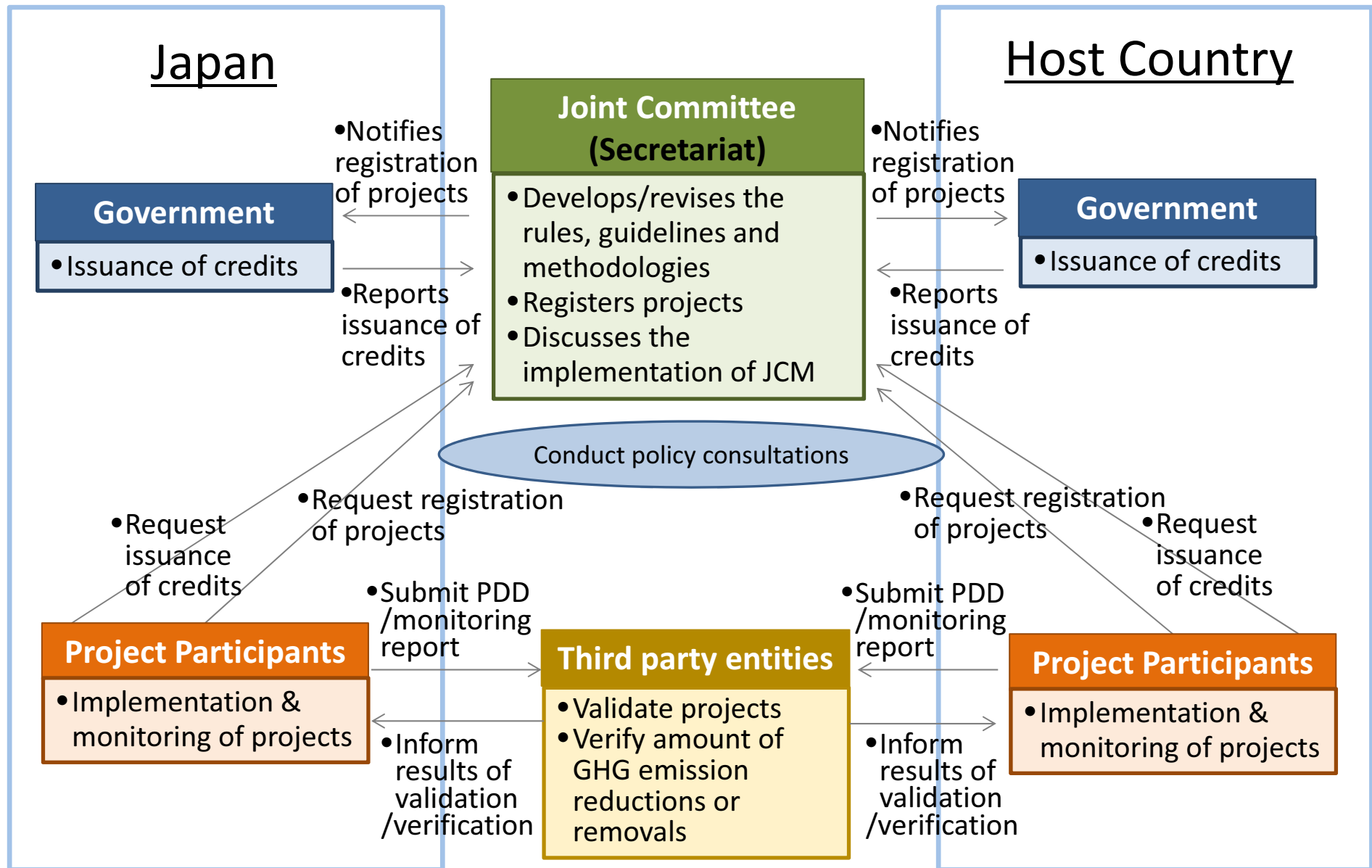


## Basic Concept of the JCM

- Facilitating diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of developing countries.
- Appropriately evaluating contributions to GHG emission reductions or removals from Japan in a quantitative manner, by applying measurement, reporting and verification (MRV) methodologies, and use them to achieve Japan's emission reduction target.
- Contributing to the ultimate objective of the UNFCCC by facilitating global actions for GHG emission reductions or removals, complementing the CDM.



# 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.

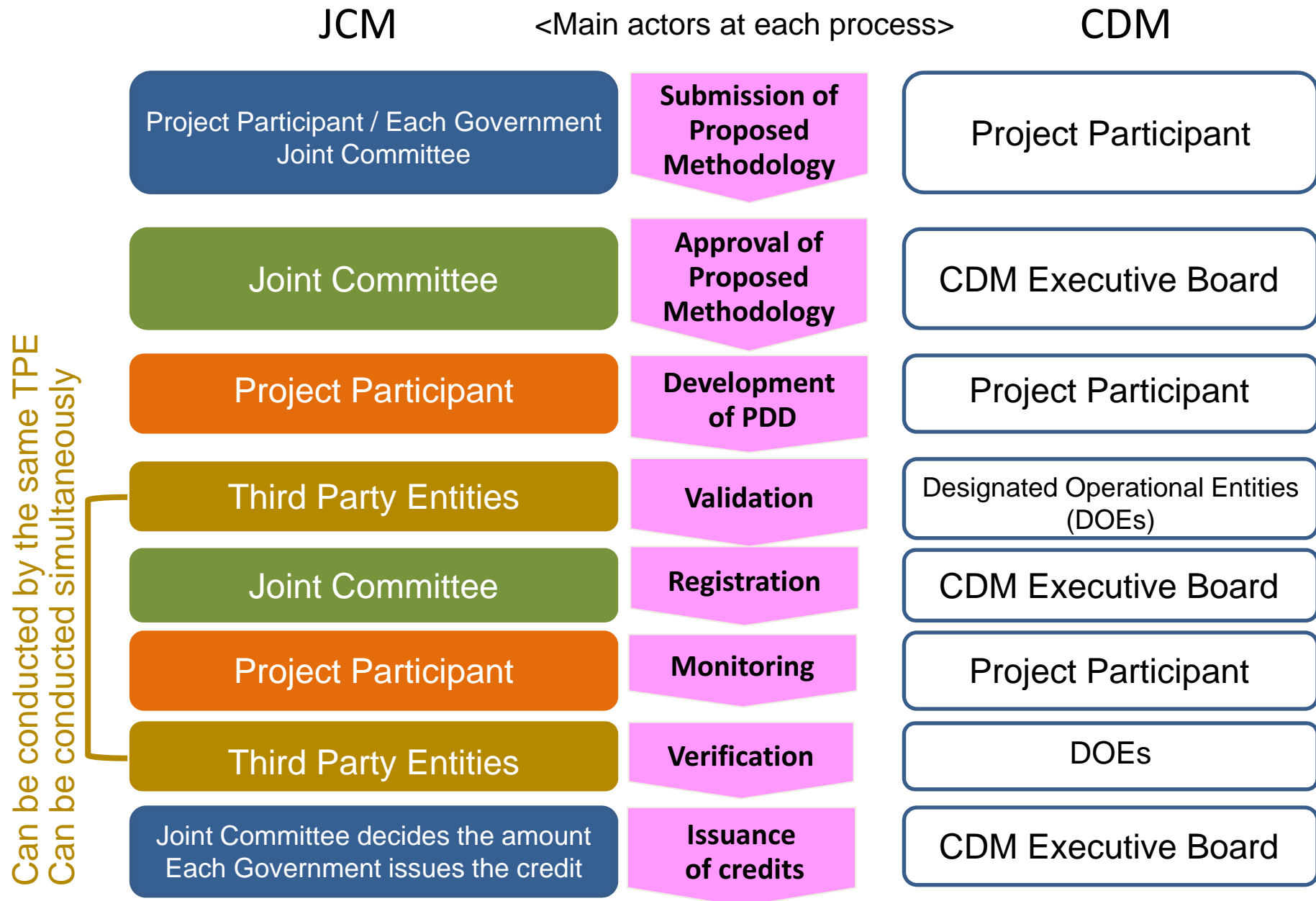
## Approaches of the JCM

- The JCM should be designed and implemented, taking into account the followings:
  - (1) Ensuring the robust methodologies, transparency and the environmental integrity;
  - (2) Maintaining simplicity and practicality based on the rules and guidelines;
  - (3) Promoting concrete actions for global GHG emission reductions or removals;
  - (4) Preventing uses of any mitigation projects registered under the JCM for the purpose of any other international climate mitigation mechanisms to avoid double counting on GHG emission reductions or removals.

## Features of the JCM

- (1) The JCM starts its operation as the non-tradable credit type mechanism.
- (2) Both Governments continue consultation for the transition to the tradable credit type mechanism and reach a conclusion at the earliest possible timing, taking account of implementation of the JCM.
- (3) The JCM aims for concrete contributions to assisting adaptation efforts of developing countries after the JCM is converted to the tradable credit type mechanism.
- (4) The JCM covers the period until a possible coming into effect of a new international framework under the UNFCCC.

# Project Cycle of the JCM and the CDM



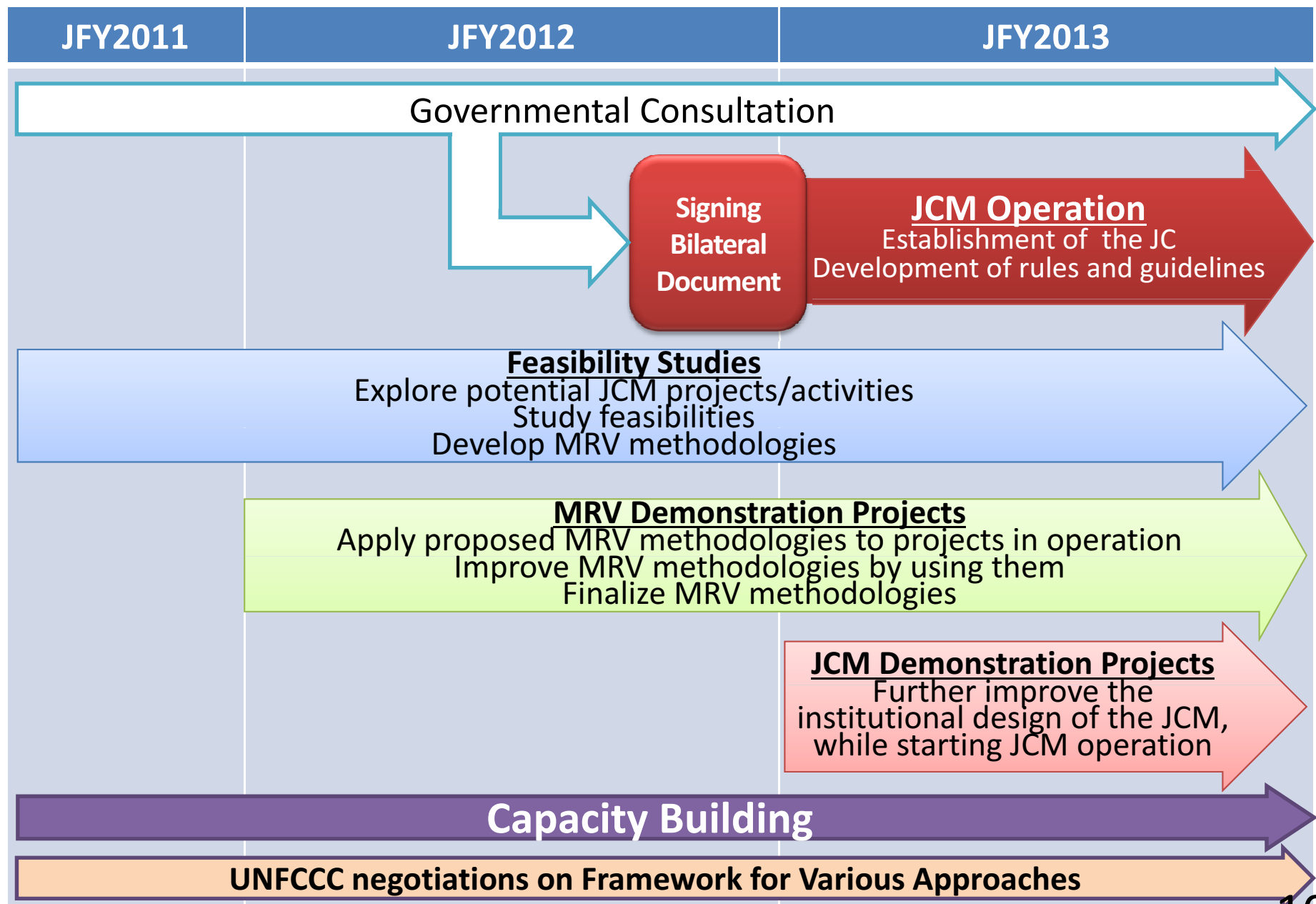


# Key features of the JCM in comparison with the CDM

(Subject to further consideration and discussion with host countries)

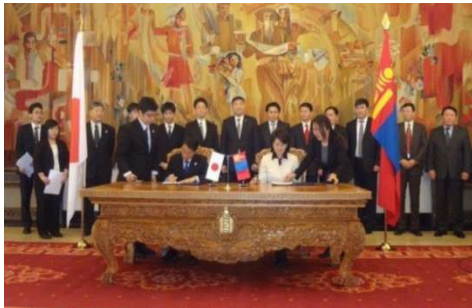
|                                    | JCM   | CDM   |
|------------------------------------|---|---|
| Governance                         | - “de-centralized” structure<br>(Each Government, Joint Committee)  | - “centralized” structure<br>(CMP, CDM Executive Board)   |
| Sector/project Coverage            | - Broader coverage  | - Specific projects are difficult to implement in practice<br>(e.g. USC coal-fired power generation)  |
| Validation of projects             | - In addition to DOEs, ISO14065 certification bodies can conduct<br>- Checking whether a proposed project fits eligibility criteria which can be examined objectively | - Only DOEs can conduct<br>- Assessment of additionality of each proposed project against hypothetical scenarios                                |
| Calculation of Emission Reductions | - Spreadsheet are provided<br>- Default values can be used in conservative manner when monitored parameters are limited.  | - Various formulas are listed<br>- Strict requirements for measurement of parameters  |
| Verification of projects           | - The entity which validated the project can conduct verification<br>- Validation & verification can be conducted simultaneously                                      | - In principle, the entity which validated the project can not conduct verification<br>- Validation & verification must be conducted separately |

# Roadmap for the JCM



## Countries with which Japan has signed on bilateral documents

- Japan has held consultations for the JCM with developing countries since 2011 and signed the bilateral document for the JCM with Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Viet Nam, Lao PDR and Indonesia.



Mongolia  
On January 8, 2013  
(Ulaanbaatar)



Bangladesh  
On March 19, 2013  
(Dhaka)



Ethiopia  
On May 27, 2013  
(Addis Ababa)



Kenya  
On June 12, 2013  
(Nairobi)



Maldives  
On June 29, 2013  
(Okinawa)



Viet Nam  
On July 2, 2013  
(Hanoi)



Lao PDR  
On August 7, 2013  
(Vientiane)



Indonesia  
On August 26, 2013  
(Jakarta)

- Japan held the 1st Joint Committee with Mongolia, Bangladesh, Ethiopia and Kenya respectively.

## The current status of UNFCCC negotiation (1/2)

### Decision 1/CP18

41. *Acknowledges* that Parties, individually or jointly, may develop and implement various approaches, including opportunities for using markets and non-markets, to enhance the cost-effectiveness of, and to promote, mitigation actions, bearing in mind different circumstances of developed and developing countries;
42. *Re-emphasizes* that, as set out in decision 2/CP.17, paragraph 79, all such approaches must meet standards that deliver real, permanent, additional and verified mitigation outcomes, avoid double counting of effort and achieve a net decrease and/or avoidance of GHG emissions;
44. *Requests* the SBSTA to conduct a work programme to elaborate a framework for such approaches, drawing on the work of the AWG-LCA on this matter, including the relevant workshop reports and technical paper, and experience of existing mechanisms, with a view to recommending a draft decision to the COP for adoption at its 19th session;
45. *Considers* that any such framework will be developed under the authority and guidance of the Conference of the Parties;

## The current status of UNFCCC negotiation (2/2)

### Decision 1/CP18

46. *Decides* that the work programme referred to in paragraph 44 above shall address the following elements, inter alia:

- (a) The purposes of the framework;
- (b) The scope of approaches to be included under the framework;
- (c) A set of criteria and procedures to ensure the environmental integrity of approaches in accordance with decision 2/CP.17, paragraph 79;
- (d) Technical specifications to avoid double counting through the accurate and consistent recording and tracking of mitigation outcomes;
- (e) The institutional arrangements for the framework;

- The JCM is one of various approaches Japan and partner countries are jointly developing and implementing , and Japan intends to contribute to elaborating the framework for such approaches under the UNFCCC.
- Japan also intends to report to the COP regarding the use of the JCM in Biennial Reports including the Common Tabular in line with Decision 19/CP18.

# Technical Details Currently Considered for the JCM

(Subject to further consideration and discussion with host countries)

# Necessary documents for the JCM

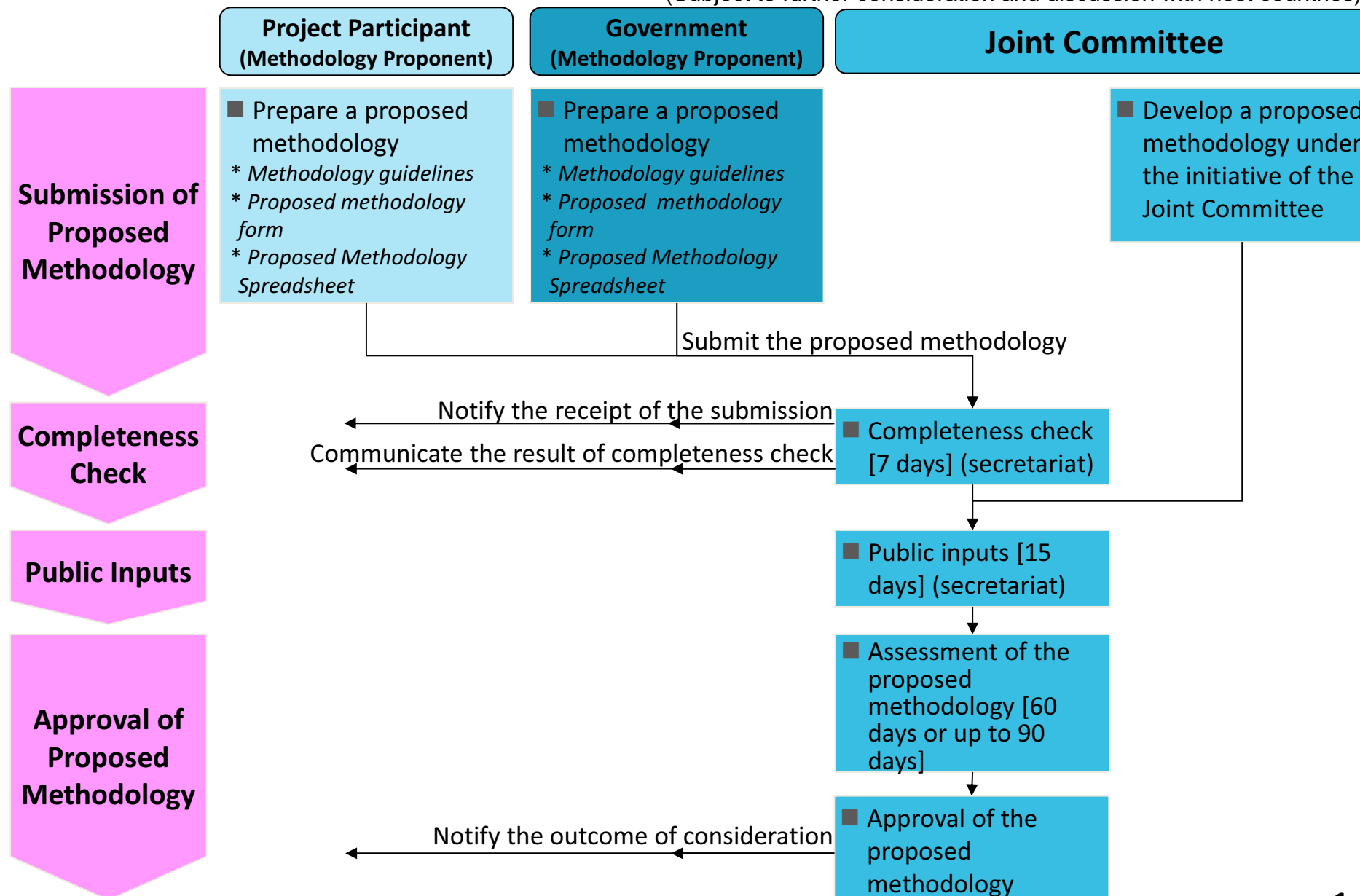
(Subject to further consideration and discussion with host countries)

|                           |                         | 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 host countries)



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



# Project Cycle Procedure of the JCM (1/2)

(Subject to further consideration and discussion with host countries)

**Project Participant**

**Third-Party Entity**

**Joint Committee**

**Government**

## Development of PDD

- Complete a PDD and develop a monitoring plan
  - \* PDD form and Monitoring Spreadsheet
  - \* PDD and monitoring guidelines
- Complete an MoC
  - \* Form for the "Modalities of communication statement"

Submit the PDD and MoC, and request for validation and public inputs

## Validation

Validation and verification can be conducted simultaneously or separately.

Notify the receipt of the submission

- Validate a project
- Prepare a validation report
  - \* Validation and verification guidelines
  - \* Validation report form

■ Public inputs[30 days] (secretariat)

Submit the validation report, and the validated PDD and MoC

## Registration

- Complete a registration request form
  - \* Registration request form

Request for registration

Notify the receipt of the request

Notify the conclusion

Notify the registration

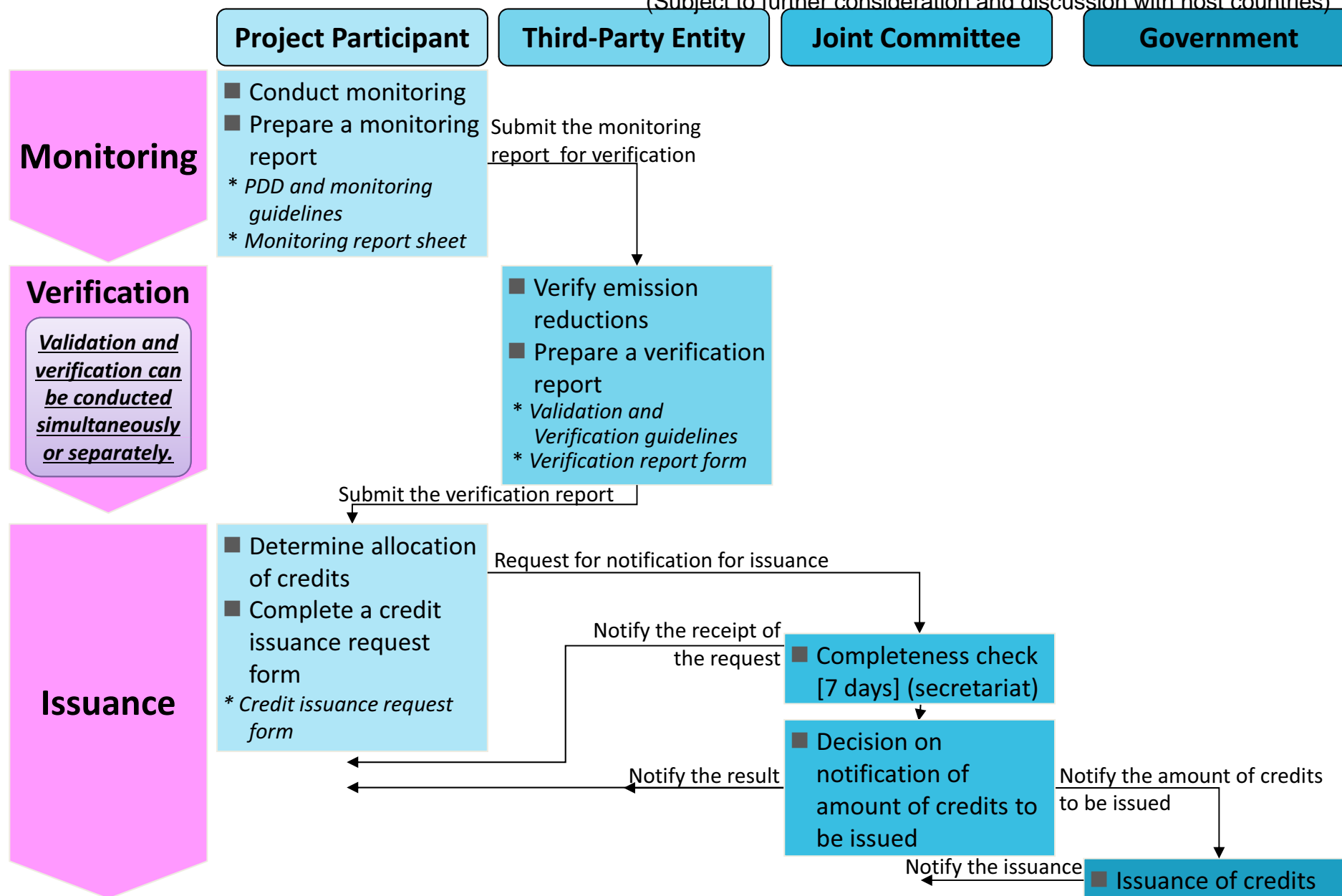
■ Completeness check [7 days] (secretariat)

■ Registration

Notify the registration

# Project Cycle Procedure of the JCM (2/2)

(Subject to further consideration and discussion with host countries)



# Rules of Procedures for the Joint Committee

(Subject to further consideration and discussion with host countries)

## Members

- The Joint Committee (JC) consists of representatives from both Governments.
- Each Government designates members, which may not exceed [10].
- The JC has two Co-chairs to be appointed by each government (one from the host 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 [20] 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.

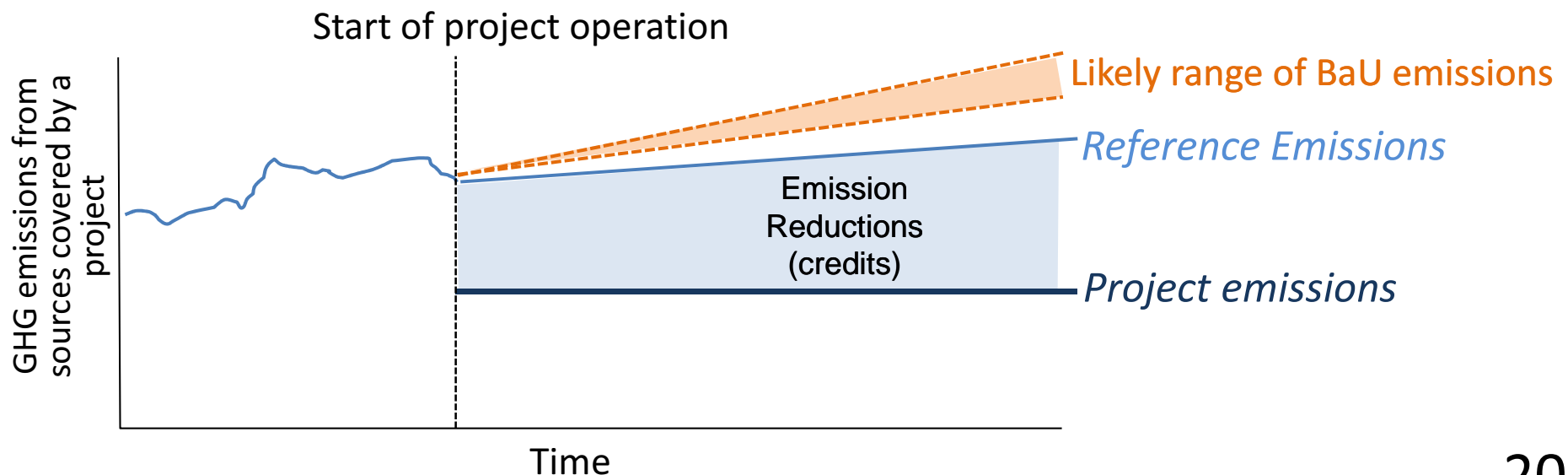
**Confidentiality:** Members of the JC, Secretariat, etc. respect confidentiality.

**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 host 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 host country.
- This approach will ensure a net decrease and/or avoidance of GHG emissions.



## Crediting Threshold

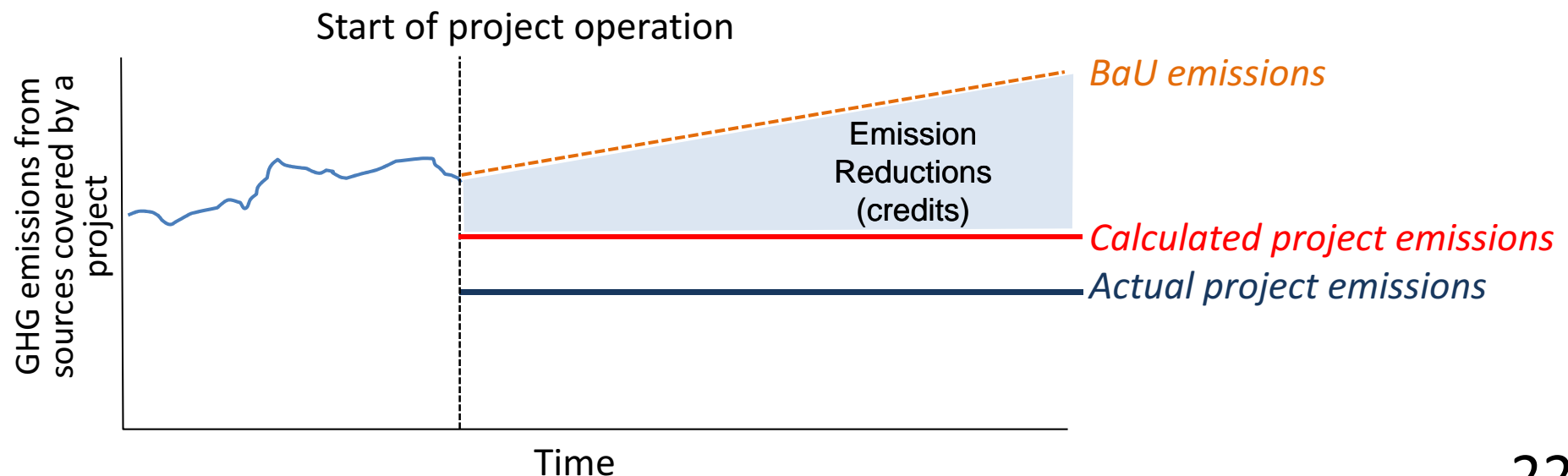
(Subject to further consideration and discussion with host countries)

- Reference emissions are calculated by multiplying a “crediting threshold” which is typically expressed as GHG emissions per unit of output by total outputs.
- A crediting threshold should be established *ex ante* in the methodology applicable for the same project type in the host country. It should also be established conservatively in order to calculate reference emissions below BaU emissions.
- This standardized approach will greatly reduce the burden of analyzing many hypothetical scenarios for demonstrating additionality of the proposed project such as under the CDM, whereas increase transparency for calculating GHG emission reductions.

## Addendum: ways to realize net reduction

(Subject to further consideration and discussion with host 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 inform project participants of 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 help calculate GHG emission reductions/removals 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 host countries)

The eligibility criteria in each JCM methodology should be established, in order to reduce emissions by:

- accelerating the deployment of low carbon technologies, products and services, which will contribute to achieving net emission reductions;
- facilitating the nationally appropriate mitigation actions (NAMAs) in host countries.



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, similar to positive list, when applying for the JCM project registration.



## Eligibility Criteria of the JCM

(Subject to further consideration and discussion with host countries)

- Eligibility criteria in JCM methodologies shall contain the following:
  1. The requirements for the project in order to be registered as a JCM project. *<Basis for the assessment of validation and registration of a proposed project>*
  2. The requirements for the project to be able to apply the JCM methodology. *<same as “applicability condition of the methodology” under the CDM>*
- 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 efficient 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

## Image of Eligibility criteria

- Simple check list is provided for project participants to determine the eligibility of a proposed project under the JCM and applicability of the methodology.
- All the criteria have to be met in order to apply a methodology.

### *Example: Building energy management system*

|             |  |
|-------------|--|
| Criterion 1 | • Energy Management System is to be introduced in already existing buildings.  |
| Criterion 2 | • The operation and control of equipment and facilities to reduce energy consumption for indoor environments are to be carried out by Energy Management System itself, not just upgrading equipments for energy consumption. |
| Criterion 3 | • Be able to identify all energy consumption in the building(s) having equipment controlled by Energy Management System.   |

# Overview of JCM Methodology, Monitoring Plan and Monitoring Report

(Subject to further consideration and discussion with host countries)

## ■ JCM methodology consists of the followings.

- 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. Title of methodology</b></p> <p>Methodology for JCM project: <b>Renewable Energy Project</b></p> <p>Version: 1.0</p>  | <p><b>2. Description of methodology</b></p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p>    | <p><b>3. Methodology for GHG emissions</b></p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> |
| <p><b>4. Methodology for GHG emissions</b></p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> | <p><b>5. Methodology for GHG emissions</b></p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> | <p><b>6. Methodology for GHG emissions</b></p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> <p>The methodology is designed to estimate the GHG emissions from the project activities. It is based on the JCM methodology and the host country's data.</p> |

### 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 |
|--|----------------------|------------------|---|------------------|--------|-------------------|------------------|--|----------------------|----------------|
| 1. Monitoring and input data after project start | (1)                  | PO <sub>1</sub>  | Project production volume at the HPFP during the period of year y | 20,000           | kg     | Option C          | Monitoring data  | Collecting electricity consumption data with verified calibration scales and inputting it to an spreadsheet electronically. Verification and calibration shall meet international standard on corresponding monitoring devices. Project deputy managers should check the input data with logsheets every 6 months. | once a month         |                |
|  | (2)                  | PPC <sub>1</sub> | Project fossil fuel consumption by the HPFP                       | 500              | kg     | Option B          | Purchase records | Collecting the purchase amount from retailer invoices and inputting it to an spreadsheet manually. Project deputy managers should check the input data with invoices every 6 months.   | once a month         |                |
|  | (3)                  | PEC <sub>1</sub> | Project electricity consumption by the HPFP                       | 500              | Wh/y   | Option C          | Monitoring data  | Collecting electricity consumption data with verified calibration scales and inputting it to an spreadsheet electronically. Verification and calibration shall meet international standard on corresponding monitoring devices.  | continuous           |                |
| 2. CO2 emission reductions                       |                      |                  |   | 22.81            | tCO2/y |                   |                  |  |                      |                |

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 host 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

**1.1. Summary of constraints relevant to the constraints**

| Constraint | Constraint received                                   | Consideration of constraint received                  |
|------------|---|---|
| Water      | Water supply is not a constraint in the project area. | Water supply is not a constraint in the project area. |

**1.2. Estimated resources (estimated in each year)**

| Year | Estimated resources (CO <sub>2</sub> e) | Estimated resources (CO <sub>2</sub> e) | Estimated resources (CO <sub>2</sub> e) |
|------|---|---|---|
| 2013 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2014 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2015 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2016 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2017 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2018 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2019 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2020 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2021 | 10,000                                  | 10,000                                  | 10,000                                  |
| 2022 | 10,000                                  | 10,000                                  | 10,000                                  |

**1.3. Calculation of monitoring parameters**

| Parameter               | Unit           | Value  |
|-------------------------|----------------|--------|
| Electricity consumption | kWh            | 10,000 |
| Water consumption       | m <sup>3</sup> | 10,000 |
| CO <sub>2</sub> e       | ton            | 10,000 |

**1.4. Application of an approved methodology**

**1.5. Project description**

**1.6. Location of project, including coordinates**

**1.7. Name of project participants**

**1.8. Dates**

| Responsible personnel   |  | Role   |  |
|-------------------------|--|--|--|
| Project Manager         |  | Responsible for project planning, implementation, monitoring results and reporting.                        |  |
| Project Deputy Managers |  | Appointed to be in charge of approving the archived data after being checked and corrected when necessary. |  |
| Monitoring operators    |  | Appointed to be in charge of monitoring structure (data collection and storage), including                 |  |

| Monitoring point No. | Parameters       | Description of data   | Estimated Values | Units | Monitoring option | Source of data   | Measurement methods and procedures  | Monitoring frequency | Other comments |
|----------------------|------------------|---|------------------|-------|-------------------|------------------|---|----------------------|----------------|
| (1)                  | PO <sub>2</sub>  | Project production volume at the HPIF during the period of year y | 20,000           | y     | option C          | monitored data   | - Collecting electricity consumption data with verified/calibrated weighing scale and inputting it to an spreadsheet electronically.<br>- Verified scales are installed and they are calibrated once a year.<br>- Verification and calibration shall meet international standards or corresponding monitoring devices.<br>- Project deputy managers double check the input data with logbooks every 6 months. | once a month         |                |
| (2)                  | PFC <sub>2</sub> | Project fossil fuel consumption by the HPIF                       | 500              | y     | option B          | purchase records | - Collecting the purchase amount from retailer invoices and inputting it to an spreadsheet manually.<br>- Project deputy managers double check the input data with invoices every 6 months.   | once a month         |                |
| (3)                  | PEC <sub>2</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 spreadsheet electronically.<br>- Verified monitoring devices are installed and they are calibrated once a year.<br>- Verification and calibration shall meet international standards or corresponding monitoring devices.   | continuous           |                |

# Monitoring Report

(Subject to further consideration and discussion with host 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 stated values 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 electrically<br>- Verified scales are installed and they are calibrated once a year.<br>- Verification and calibration shall meet international standard on corresponding monitoring devices.<br>- Project deputy managers double check the input data with logbooks every 6 months | once a month         |                |
| 4  | 2013-2014   | (2)   | FFCO <sub>y</sub> | Project fossil fuel consumption by the HPIF                        | 200              | ty     | Option B          | purchase records | - Collecting the purchase amount from retailer invoices and inputting it to an spread sheet manually.<br>- Project deputy managers double check the input data with invoices every 6 months   | once a month         |                |
| 5  | N/A   | (3)   | PEC <sub>y</sub>  | Project electricity consumption by the HPIF                        | 300              | kWh/ty | Option C          | monitored data   | - Collecting electricity consumption data with verified/calibrated electricity monitoring devices and inputting to an spread sheet electrically<br>- Verified monitoring devices are installed and they are calibrated once a year.<br>- Verification and calibration shall meet international standard on corresponding monitoring devices   | continuous           |                |
| 7  | * HPIF refers to High-Performance Industrial Furnace. |   |                   |  |                  |        |                   |                  |   |                      |                |
| 9  | 2. CO2 emission reductions                            |   |                   |  |                  |        |                   |                  |   |                      |                |
| 10 | CO2 emission reductions                               |   |                   |  |                  |        |                   |                  |   |                      |                |
| 11 | 22,881  |   |                   |  |                  |        |                   |                  |   |                      |                |
| 12 | Units   |   |                   |  |                  |        |                   |                  |   |                      |                |
| 13 | tCO2/ty   |   |                   |  |                  |        |                   |                  |   |                      |                |
| 14 | [Monitoring option]                                   |   |                   |  |                  |        |                   |                  |   |                      |                |
| 15 | 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 |                   |  |                  |        |                   |                  |   |                      |                |
| 16 | Option B.   | Based on the amount of transaction which is measured directly using metering instruments (Data used: commercial evidence such as invoices)          |                   |  |                  |        |                   |                  |   |                      |                |
| 17 | Option C.   | Based on the actual measurement using metering instruments (Data used: metering instruments)  |                   |  |                  |        |                   |                  |   |                      |                |
| 18 |   |   |                   |  |                  |        |                   |                  |   |                      |                |

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

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

## Possible Contents of the JCM PDD

### **A. Project description**

(Subject to further consideration and discussion with host 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. Figure of 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.

## References

- ◆ Feasibility Studies
- ◆ Capacity Building



# JCM Promotion Scheme by METI

## JCM Demonstration Projects

JCM Demonstration Project is implemented by NEDO (New Energy and Industrial Technology Development Organization) , which supports the project cost necessary to verify the amount of GHG emission reduction in line with JCM rules and guidelines.

- The budget for FY 2013: 3.5 billion JPY (approximately \$38 million)
- Coverage of project cost: Cost of the JCM Demonstration projects necessary for MRV  
e.g. Cost of design, machines, materials, labors, travel, etc.
- Eligibility for the JCM Demonstration projects:
  - Concrete Projects to demonstrate the effectiveness of leading Japanese technologies and/or products installed and operated in the projects, and the amount of their GHG emission reduction with MRV methodology by actual operation
  - Project Participants consist of entities from both countries, and only the Japanese entity can apply for the JCM Demonstration projects. The projects shall be completed within 3 years.

## JCM Study Programmes

### JCM Feasibility Study (FS)

The study to promote potential JCM projects and to survey its feasibility as well as to check the practicality of the MRV methodology.

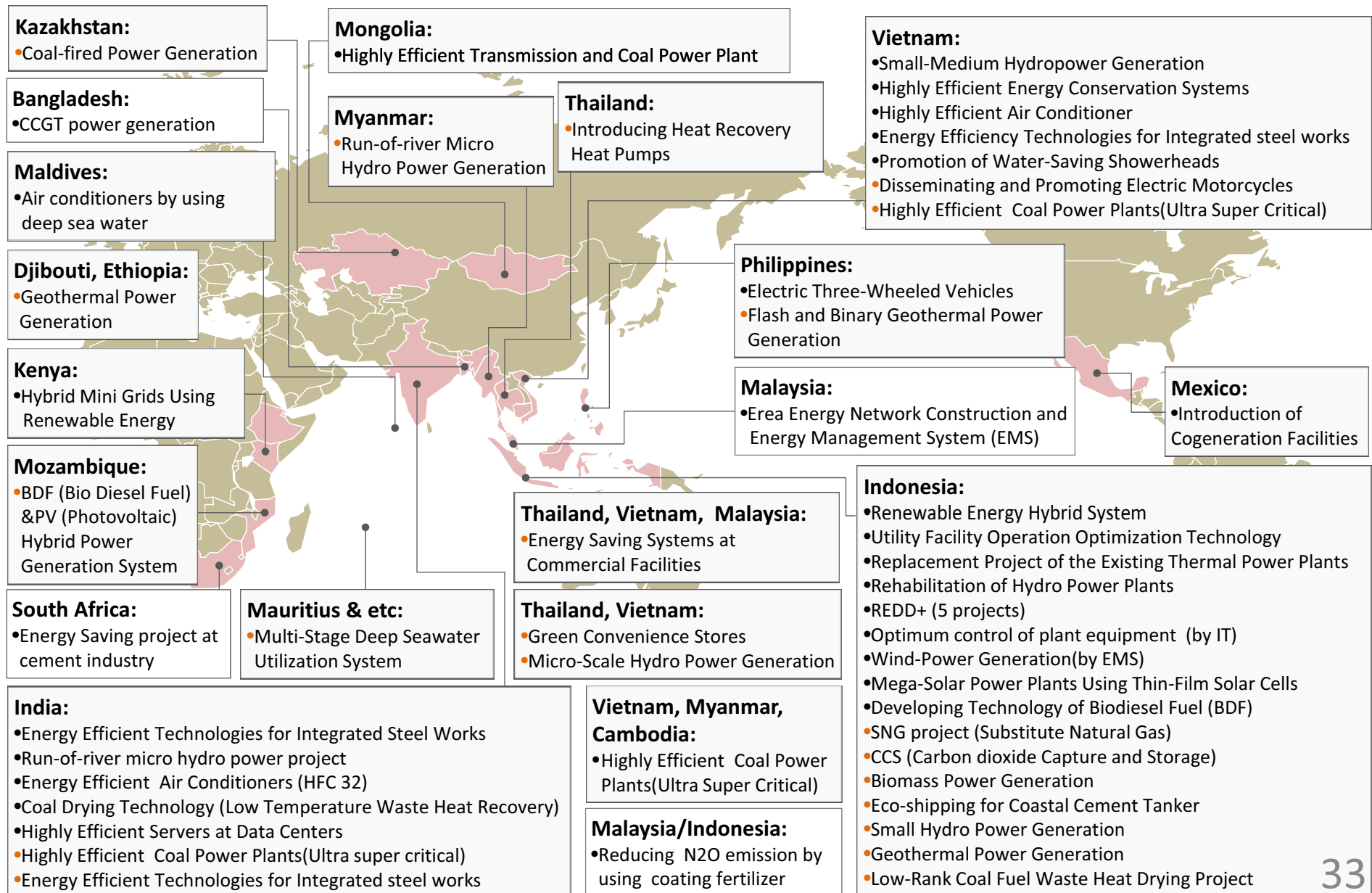
## Capacity Building Programmes



# JCM Feasibility Studies (FSs) by METI & NEDO in FY2012

54 projects were selected (19 countries)

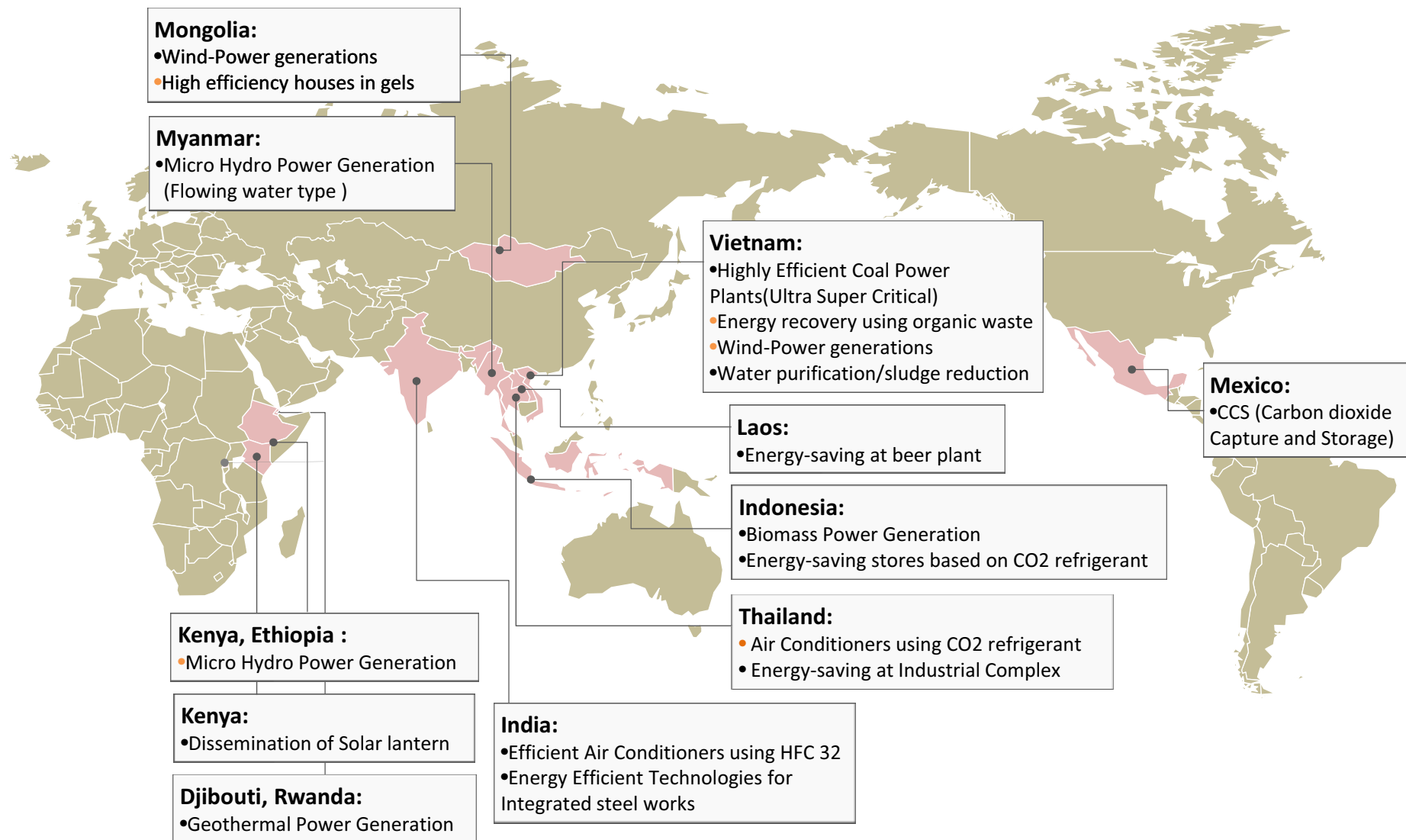
- (Black) → METI's FSs for Policy Recommendation (33 projects)
- (Yellow) → NEDO's FSs for Project Exploration /Development (21 projects)



## JCM Feasibility Studies (FSs) by METI & NEDO in FY2013

18 projects were selected ( 12countries)

- (Black) → METI's FSs for Policy Recommendation (13 projects)
- (Yellow) → NEDO's FSs for Project Exploration /Development (5 projects)



## Capacity Building Activities by METI

METI engages in a variety of capacity building activities, such as seminars, expert dispatches, technical experts invitations, joint researches on MRV methodologies, and government-private sector dialogues:

(Purposes)

- ✧ To provide technical know-how necessary to implement GHG emissions reduction projects under the JCM
- ✧ To establish MRV methodologies for the JCM
- ✧ To train experts on MRV methodologies for the JCM
- ✧ To train entities to act as third-party verifiers for the JCM
- ✧ To deepen understanding on the institutional and technical aspects of the JCM both at government and private sectors.

### ■ Capacity building activities by METI in FY2012

\* FY2013's projects are under consideration.

#### METI

Highly Efficient Transmission and Coal Power Plant (Mongolia)

Eco-friendly driving using digital tachograph (Vietnam)

Reduce power transmission loss by using highly efficient transformer (Vietnam)

Highly efficient coal power plant (Ultra super critical) (Vietnam)

Energy saving project at cement industry (South Africa)

Highly efficient servers at Data Centers (India)

Energy efficient technologies at Steel plant (India)

#### HIDA (The Overseas Human Resources and Industry Development Association)

High Efficiency Ion-Exchange Membrane Electrolysis Technology (Brazil)

# JCM Promotion Scheme by MOEJ

## Financing Programme for JCM Model Projects

MOEJ will finance part of an investment cost (up to the half), as premises for seeking to deliver JCM credits (half of issued) to the MOEJ.

- The budget for FY 2013: 1.2 billion JPY (approximately \$13 million)
- Recipient: International consortiums which include Japanese entities
- Scope of the financing: Facilities which reduce CO<sub>2</sub> from fossil fuel combustion as well as construction cost for installing those facilities
- Eligible Projects : Starting construction after the adaption of the financing, and finish construction within FY2013 (one year extension may be approved)

## Study Programmes for JCM Projects

### JCM Project Planning Study (PS)

The study for development of a Model Project in the near future.

### JCM Methodology Demonstration Study (DS)

The study to check the practicality of the draft methodology by applying existing projects under operation.

### JCM Feasibility Study (FS)

The study to promote potential JCM projects and to survey its feasibility.

## Capacity Building Programmes for the JCM

# JCM Model Projects in 2013 by MOEJ

## Mongolia:

### ★ Upgrading and Installation of Centralized Control System of High-Efficiency Heat Only Boiler (HOB)

The high-efficiency Heat Only Boilers (HOBs) will replace outdated low-efficiency HOBs, to supply heated water for winter indoor heating. The project will also introduce centralized control system for the integrated heat supply in collective buildings.

## Cambodia:

### ★ Small-scale Biomass Power Generation by Using Stirling Engines

The introduction of small-scale biomass power generation systems with stirling engines will replace diesel-based power generation at rice mills. The stirling engine, external-combustion engine, is suitable for the utilisation of biomass such as rice husk.

## Viet Nam:

### ★ Integrated Energy Efficiency Improvement at Beer Factory

A set of high performance equipment for energy efficiency improvement and renewable energy generation will be introduced in beer factories. Before the installation, the potential of energy saving and possible high potential points in the beer production process will be identified by using the energy structure analysis simulation technology.

## Indonesia:

### ★ Energy Saving for Air-Conditioning and Process Cooling at Textile Factory

At the textile industry where air conditioning is necessary for the product quality control, the high performance refrigerating machine with efficient compressor and economizer cycle will be introduced. In addition, the refrigerating machine also utilize HFC245fa refrigerant – non-ozone depleting substance – as well as adopt the recovery system of the refrigerant to avoid the release in the atmosphere.

### ★ Energy Savings at Convenience Stores

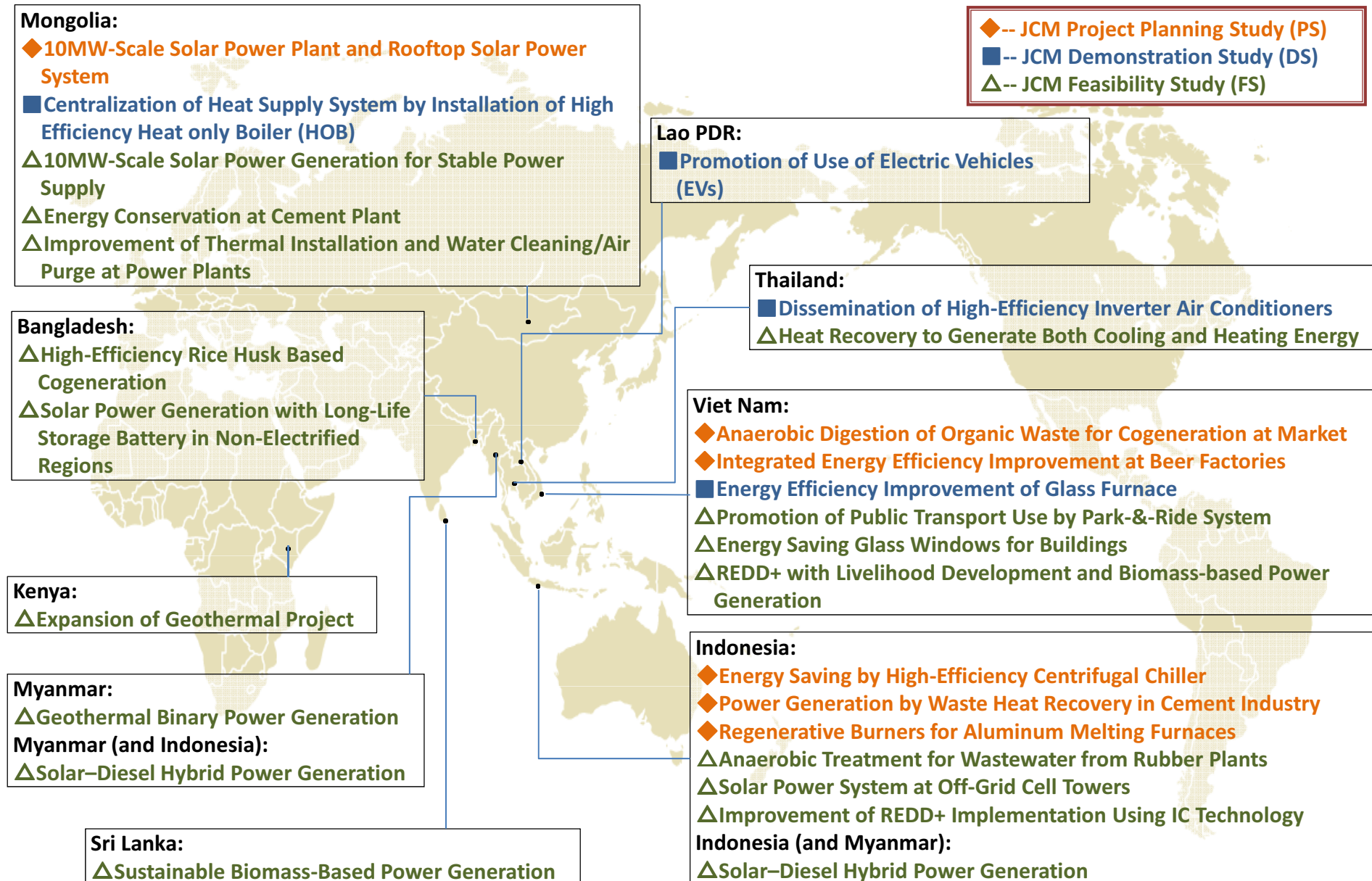
The latest, highly efficient equipment is installed in the three major energy consumptions sources at food retail stores (Refrigeration, Air-conditioning and Lighting). Total electricity consumption is estimated to be decreased by 21% with LED lighting, natural refrigerant (CO2) refrigeration system and highly efficient air-conditioning system.

## Bangladesh:

### ★ Brick Production based on Non-Firing Solidification Technology

In place of the existing brick production with the firing process with the combustion of coal, the new brick production with the non-firing solidification technology will be introduced. Since the new process utilizes waste as main materials and grew and pressing process, and does not require the use of fossil fuel, GHG emissions will be reduced.

# Overview of JCM Planning/Demonstration/Feasibility Studies in 2013 by MOEJ





# New Mechanisms Information Platform

The screenshot displays the 'New Mechanisms Information Platform' website. The header includes navigation links for 'Inquiry', 'E-mail Newsletter', and 'Japanese'. A main menu bar contains links for 'Joint Crediting Mechanism (JCM)', 'Support Programmes', 'Information on NAMAs', 'Useful Experiences', 'Useful Calculation Methodology', and 'REDD/REDD+'. The main content area is titled 'Joint Crediting Mechanism (JCM)' and features a section 'About JCM' with bullet points describing its purpose. Below this is a diagram illustrating the JCM process: Japan provides 'Leading Low Carbon Technologies, etc. and implementation of mitigation actions' to a 'Host Country'. The Host Country implements a 'JCM Project' which results in 'GHG emission reductions / removals'. These are then converted into 'Credits' which are used to achieve Japan's emission reduction target. A note states 'MRV Methodologies will be developed by the Joint Committee'. Below the diagram is a table of 'Relevant documents of the JCM' with columns for 'Date' and 'Title'. The table lists three documents from July 10, 2013, May 23, 2013, and Mar 8, 2013. Below the table is a section for 'Relevant Documents' with links to 'Gov't of Japan', 'Submissions to the UNFCCC', 'MOEJ', and 'MOFA'. At the bottom, there is a section for 'JCM Partner Country Information' listing Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Viet Nam, and Laos. The final section is 'Methodologies and Projects Information' with links to 'Methodologies' and 'Projects'.

**New Mechanisms Information Platform**

Font Size: [Standard](#) [Big](#) [Maximum](#) Site Search:  [Google Custom Search](#)

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[Joint Crediting Mechanism \(JCM\)](#) [Support Programmes](#) [Information on NAMAs](#) [Useful Experiences](#) [Useful Calculation Methodology](#) [REDD/REDD+](#)

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Joint Crediting Mechanism (JCM)

**About JCM**

- Proposed Elements of the Joint Crediting Mechanism (JCM)
  - To facilitate diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of developing countries.
  - To appropriately evaluate contributions to GHG emission reductions or removals from developed countries in a quantitative manner, through mitigation actions implemented in developing countries and use those emission reductions or removals to achieve emission reduction targets of the developed countries.
  - To contribute to the ultimate objective of the UNFCCC by facilitating global actions for emission reductions or removals.

**Japan** **Host Country**

Leading Low Carbon Technologies, etc. and implementation of mitigation actions

MRV Methodologies will be developed by the Joint Committee

Used to achieve Japan's emission reduction target

Credits

JCM Project

MRV

GHG emission reductions / removals

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**Relevant documents of the JCM**

| Date         | Title  |
|--------------|--|
| Jul 10, 2013 | <a href="#">Recent Development of The Joint Crediting Mechanism (JCM)</a>  |
| May 23, 2013 | <a href="#">Recent Development of the Joint Crediting Mechanism (JCM) / Bilateral Offset Credit Mechanism (BOCM)</a> |
| Mar 8, 2013  | <a href="#">Recent Development of the Joint Crediting Mechanism (JCM) / Bilateral Offset Credit Mechanism (BOCM)</a> |

Relevant Documents:

[Gov't of Japan](#) [Submissions to the UNFCCC](#) [MOEJ](#) [MOFA](#)

[PAGE TOP](#)

**JCM Partner Country Information**

[Mongolia](#) [Bangladesh](#) [Ethiopia](#) [Kenya](#) [Maldives](#) [Viet Nam](#)

[Laos](#)

**Methodologies and Projects Information**

[Methodologies](#) [Projects](#)

- [New Mechanisms Information Platform](http://www.mmechanisms.org/e/initiatives/index.html) website was established to provide the latest movements and information on the JCM.
- [Help Desk](#) also accepts and answers inquiries regarding the JCM.
- Another dedicated website for the JCM will be launched. In the meantime, all the documents regarding the JCM development (e.g. outcome of the JC, decisions, methodologies, and projects) are uploaded on this website.
- URL:  
<http://www.mmechanisms.org/e/initiatives/index.html>