
Introduction of the rules and guidelines of the Joint Crediting Mechanism (JCM)

15 November 2013



Contents

- I. Recent Development of the Joint Crediting Mechanism (JCM)
- II. Overview of the Rules and Guidelines of the JCM
- III. Details of the Rules and Guidelines of the JCM

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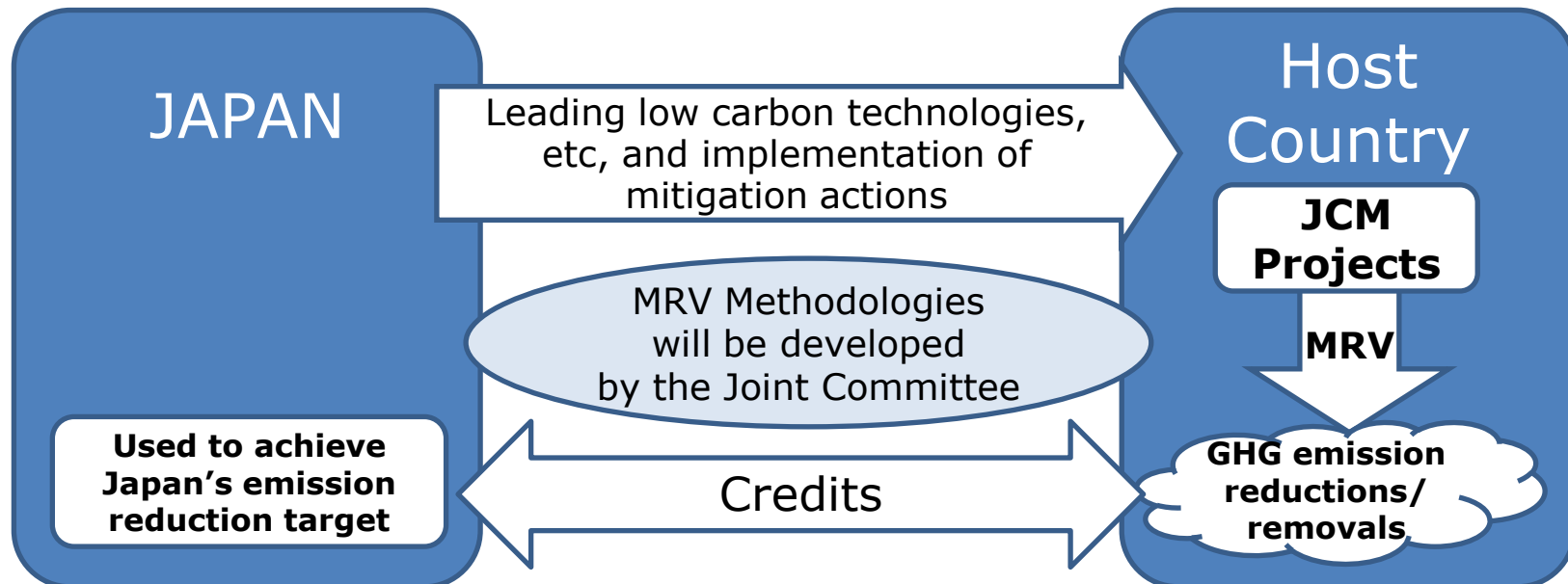
What is the JCM?

- It is not a Japanese Crediting Mechanism
 - Joint Crediting Mechanism (JCM)
 - * It is called the Bilateral Offset Credit Mechanism (BOCM) with Bangladesh
- The JCM can be implemented with countries that signed a bilateral document and adopted rules and guidelines
- It is a baseline and credit type mechanism similar to the CDM
- It ensures net emission reductions in a conservative manner

Basic concept of the JCM

● It aims at:

- ✓ Facilitating diffusion of low carbon technologies
- ✓ Evaluating GHG emission reduction/removal contribution from Japan
- ✓ Contributing to the UNFCCC ultimate goal



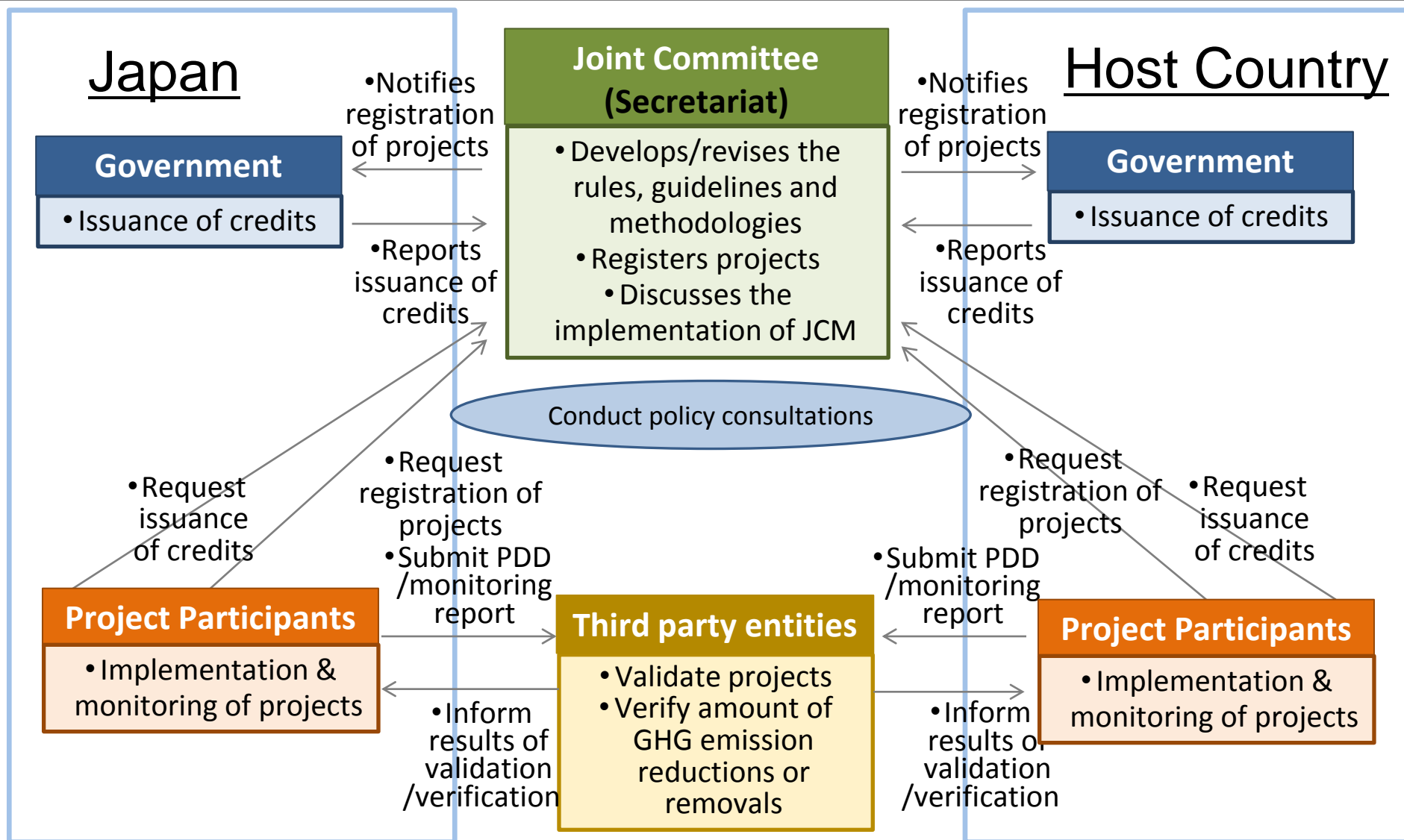
Key Features of the JCM (1/2)

- The JCM starts its operation as the non-tradable credit type mechanism.
- 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.

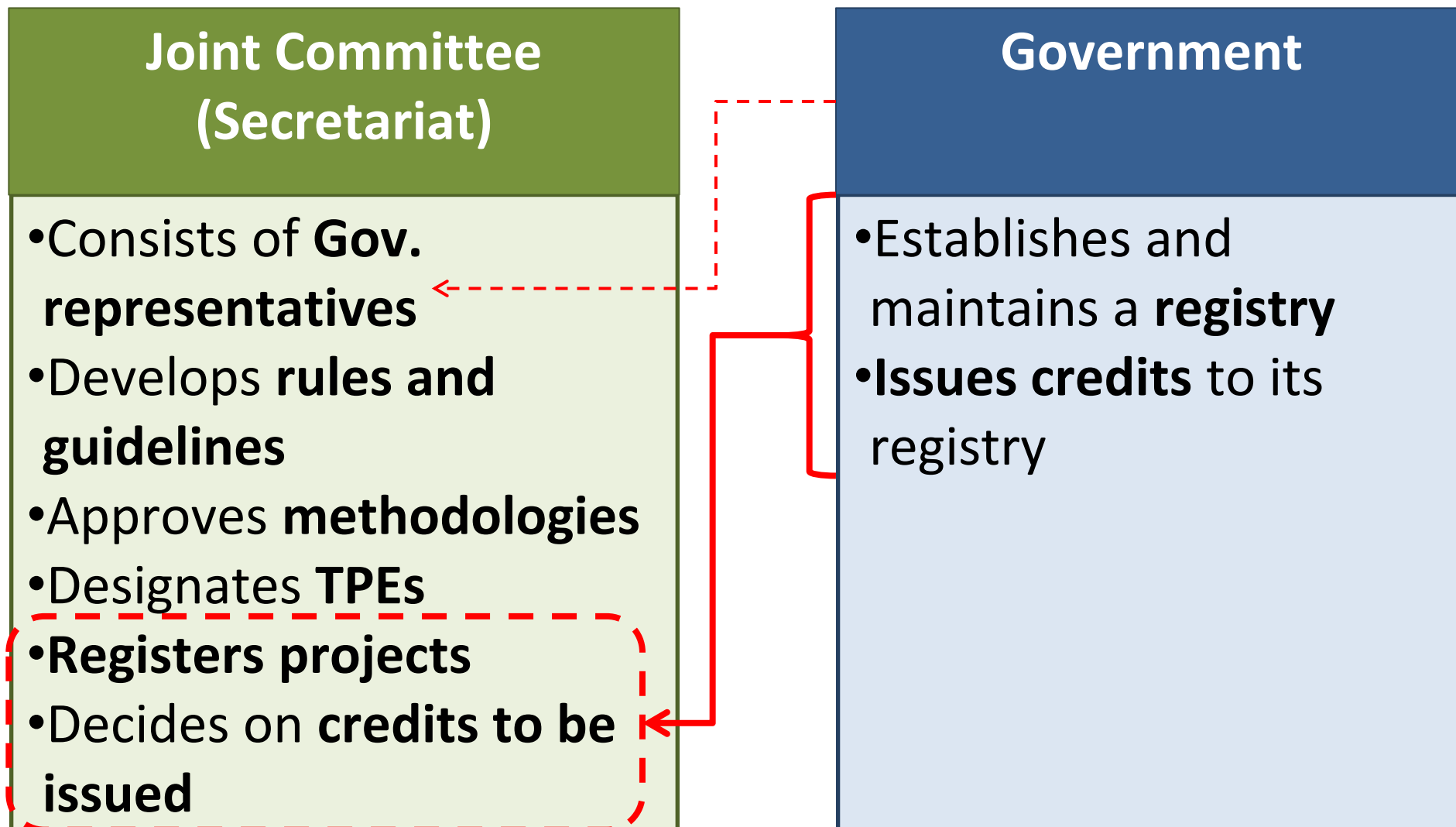
Key Features of the JCM (2/2)

- The JCM aims for concrete contributions to assisting adaptation efforts of developing countries after the JCM is converted to the tradable credit type mechanism.
- The JCM covers the period until a possible coming into effect of a new international framework under the UNFCCC.

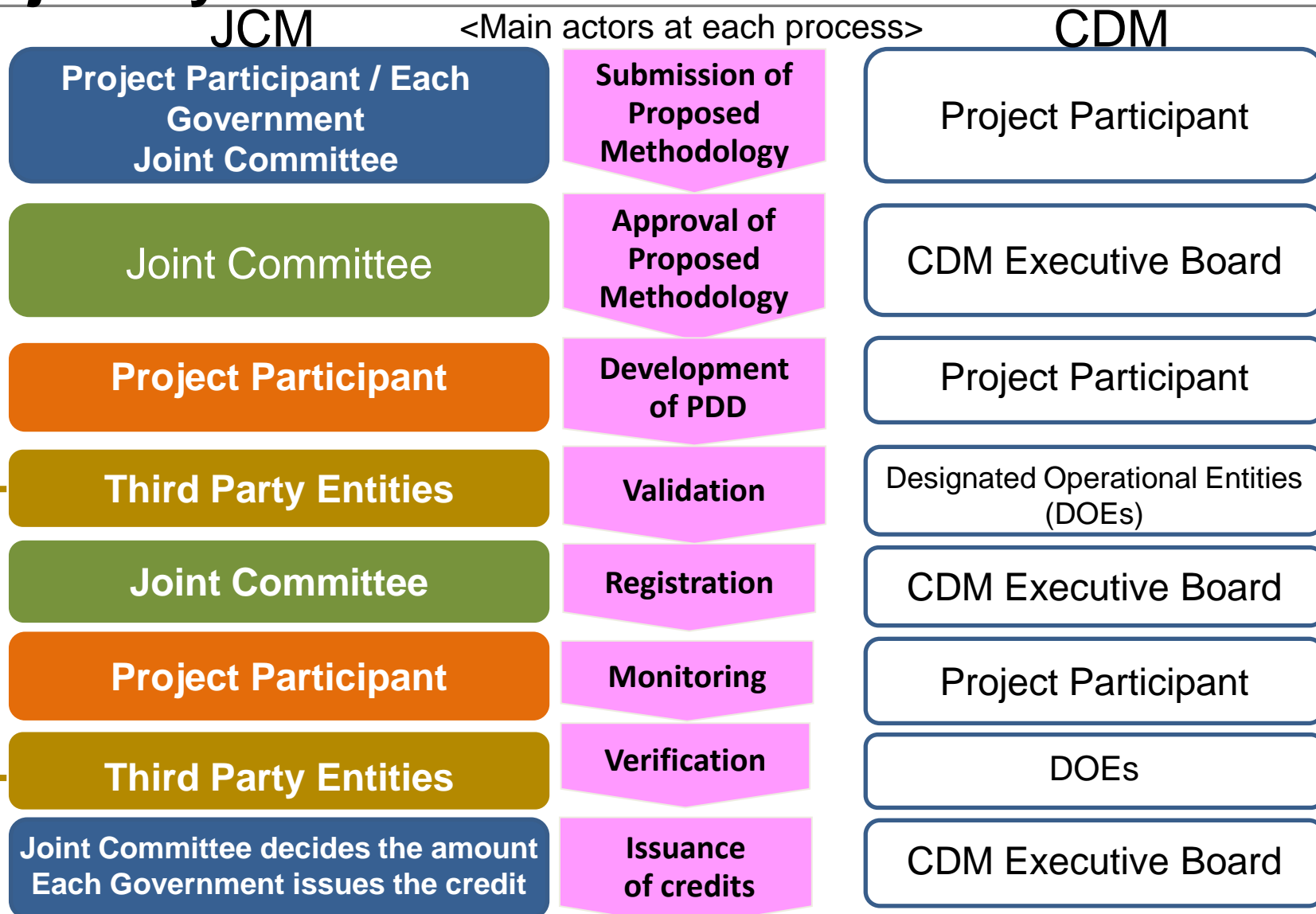
Scheme of the JCM



Role of the Joint Committee and each Government



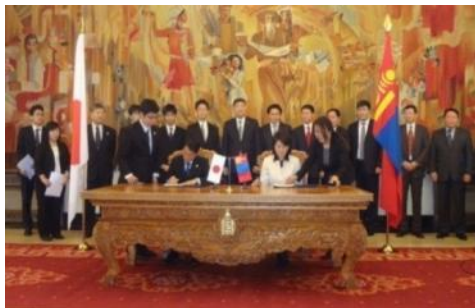
Project Cycle of the JCM and the CDM



Can be conducted by the same TPE
Can be conducted simultaneously

Current Development of the JCM

Countries with which Japan has signed on bilateral documents



Mongolia

On January 8, 2013
(Ulaanbaatar)



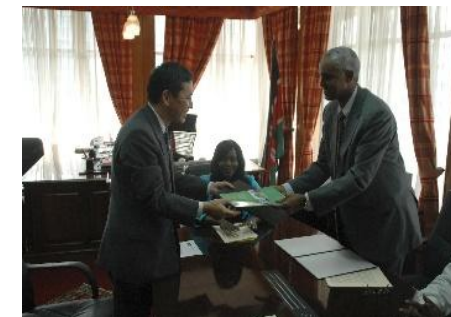
Bangladesh

On March 19, 2013
(Dhaka)



Ethiopia

On May 27, 2013
(Addis Ababa)



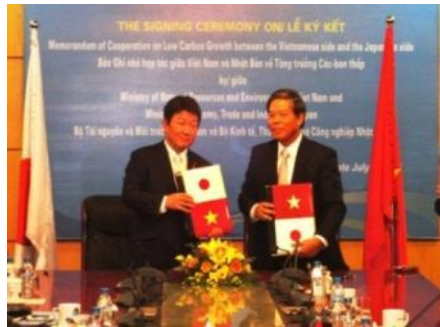
Kenya

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)

Current Development of the JCM

Major events that have taken place so far

- Japan has held consultations for the JCM with developing countries since 2011 and signed the bilateral document with **8 countries** below.
- Japan held the 1st Joint Committee meeting with **6 countries** below

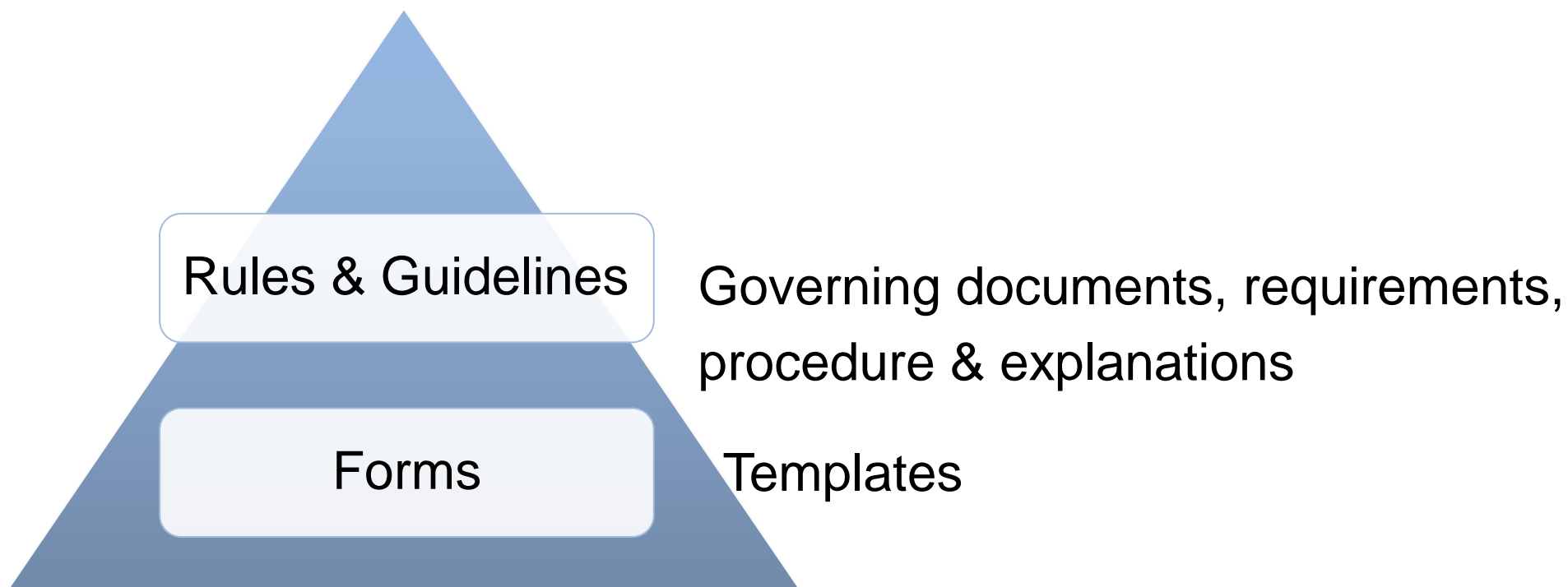
Country	Bilateral doc	Joint Committee	Rules & Guidelines
Mongolia	08 January 2013	11 April 2013	✓
Bangladesh	19 March 2013	29 July 2013	✓
Ethiopia	27 May 2013	19-20 August 2013	✓
Kenya	12 June 2013	23 August 2013	✓
Maldives	29 June 2013	<i>TBD</i>	<i>N/A</i>
Viet Nam	02 July 2013	18 September 2013	<i>Under consideration</i>
Lao PDR	07 August 2013	<i>TBD</i>	<i>N/A</i>
Indonesia	26 August 2013	16-17 October 2013	✓ <i>(to be released)</i>

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Overview of the Rules and Guidelines of the JCM

- Documents can be classified into 4 categories
- Rules, Procedure, Guidelines and Forms



Overview of the Rules and Guidelines of the JCM

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

Overview of the Rules and Guidelines of the JCM

- All relevant documents are available in the following website



The screenshot shows the 'New Mechanisms Information Platform' website. The main navigation bar includes 'Joint Crediting Mechanism (JCM)', 'Support Programmes', 'Information on NAMAs', 'Useful Experiences', 'Useful Calculation Methodology', and 'REDD/REDD+'. The breadcrumb trail reads: HOME > Joint Crediting Mechanism (JCM) > Joint Crediting Mechanism (JCM) between Mongolia and Japan. The page title is 'Joint Crediting Mechanism (JCM) between Mongolia and Japan'. A red arrow points to this title. Below the title, there is a 'Recent Development' section with a table of updates from 2013. Below that is a 'Rules and Guidelines' section with a table listing documents like 'Bilateral Document', 'Rules of Implementation ver01.0', and 'Glossary of Terms ver01.0'. A 'PAGE TOP' link is also visible.

Item	Guidelines	Forms
General	Bilateral Document	
	Rules of Implementation ver01.0	
	Glossary of Terms ver01.0	
		JCM Modalities of Communication Statement Form ver01.0

Example of the website for Mongolia

Source: New Market Mechanism Information Platform
(<http://www.mmechanisms.org/e/initiatives/mongolia.html>)

Overview of the Rules and Guidelines of the JCM

Project Cycle	 Project Cycle Procedure ver02.0	[PDF] [WORD] <ul style="list-style-type: none"> JCM Approved Methodology Revision Request Form ver01.0 [PDF] [WORD] JCM Post-Registration Changes Request Form ver01.0 [PDF] [WORD] JCM Registration Request Withdrawal Form ver01.0 [PDF] [WORD] JCM Project Withdrawal Request Form ver01.0 [PDF] [WORD] JCM Issuance Request Withdrawal Form ver01.0 [PDF] [WORD]
	 Guidelines for Developing Proposed Methodology ver01.0	<ul style="list-style-type: none"> JCM Proposed Methodology Form ver01.0 [PDF] [WORD] JCM Proposed Methodology Spreadsheet Form ver01.0 [PDF] [EXCEL]
	 Guidelines for Developing Project Design Document and Monitoring Report ver01.0	<ul style="list-style-type: none"> JCM Project Design Document Form ver01.0 [PDF] [WORD]
Third-Party Entity (TPE)	 Guidelines for Designation as a Third-Party Entity ver01.0	<ul style="list-style-type: none"> JCM Application Form for Designation as a Third-Party Entity ver01.0 [PDF] [WORD]
	 Guidelines for Validation and	<ul style="list-style-type: none"> JCM Validation Report Form [PDF] [WORD]

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Rules of Implementation

Rules of Implementation

- ✓ Governing document of the JCM which explains:
 - Purposes: Diffusion of low carbon technology, etc
 - Entities involved and their roles and functions: Each side, Joint Committee, PP and third-party entities
 - Overall process: Methodology → Issuance of credits
 - Other key features: Eligibility and period of the scheme (until possible coming into effect of a new framework)

Rules of Procedures for the Joint Committee

Rules of Procedures for the Joint Committee

- ✓ Governing document for the JC which explains:
 - Membership: JC consists of representatives from each side, members ≤ 10 , and the JC appoints 2 Co-chairs
 - Meetings: No less than once a year
 - Decision making: Decision by the JC is adopted via consensus. The JC can make decisions through electronic means (e.g. email,)

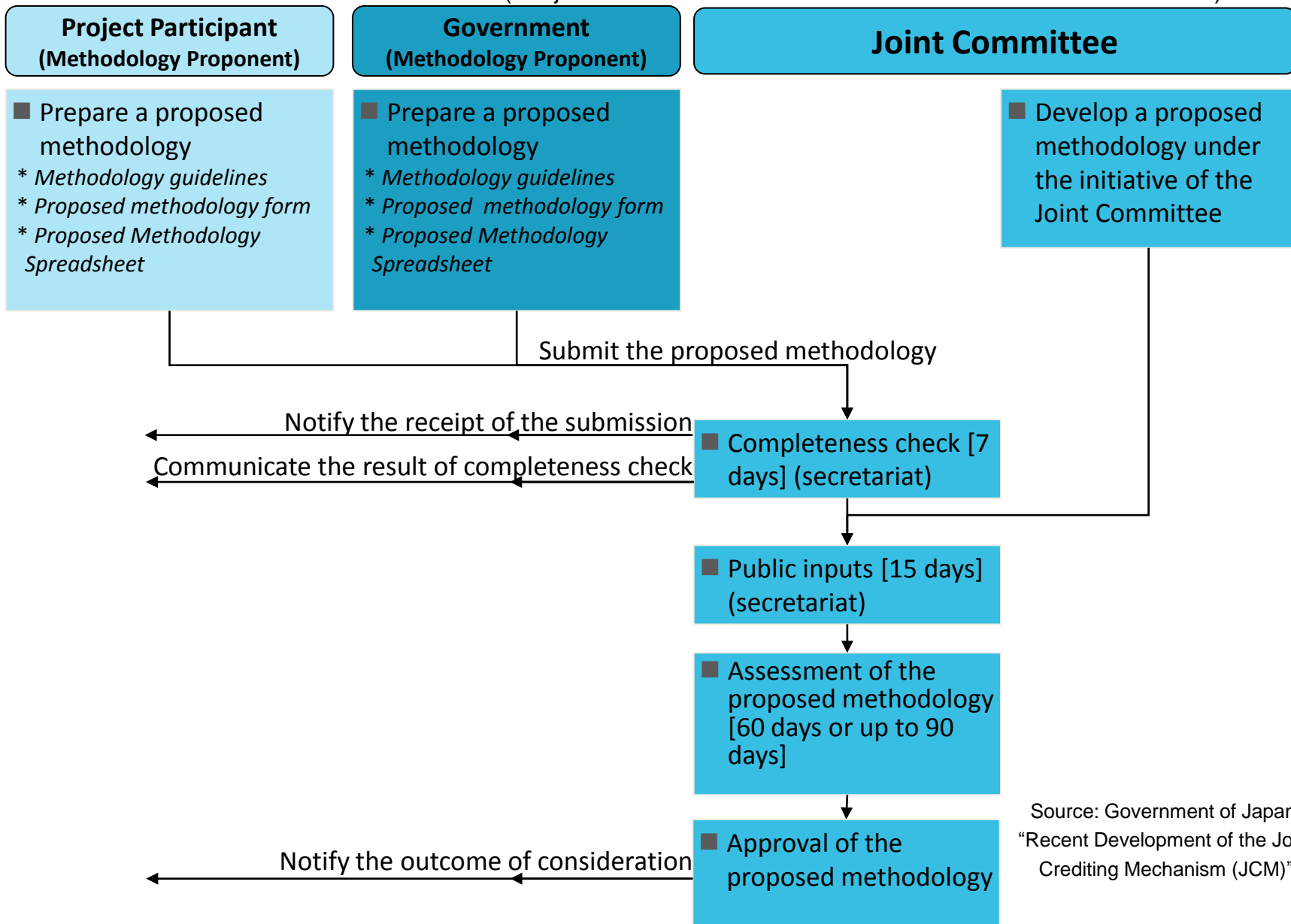
Project Cycle Procedure

Project Cycle Procedure

- ✓ Procedural document of the JCM methodology and project cycle which explains:
 - Procedure for: General and specific circumstances
 - Approval of methodologies: From submission to approval of methodologies
 - Registration: Public input of PDD, modalities of communication and validation of the project
 - Issuance: Preparation of monitoring report, verification and request for issuance

Methodology Development Procedure of the JCM

(Subject to further consideration and discussion with host countries)



Source: Government of Japan.
"Recent Development of the Joint Crediting Mechanism (JCM)"

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

Source: Government of Japan. "Recent Development of the Joint Crediting Mechanism (JCM)"

Project Cycle Procedure of the JCM (2/2)

(Subject to further consideration and discussion with host countries)

Project Participant

Third-Party Entity

Joint Committee

Government

Monitoring

- Conduct monitoring
- Prepare a monitoring report
- * *PDD and monitoring guidelines*
- * *Monitoring report sheet*

Submit the monitoring report for verification

Verification

Validation and verification can be conducted simultaneously or separately.

- Verify emission reductions
- Prepare a verification report
- * *Validation and Verification guidelines*
- * *Verification report form*

Submit the verification report

Issuance

- Determine allocation of credits
- Complete a credit issuance request form
- * *Credit issuance request form*

Request for notification for issuance

Notify the receipt of the request

- Completeness check [7 days] (secretariat)

- Decision on notification of amount of credits to be issued

Notify the result

Notify the amount of credits to be issued

Notify the issuance

- Issuance of credits

Difference from the CDM

Project Cycle Procedure

- ✓ Most submissions are done through PPs and not from TPEs
- ✓ Validation and verification can be conducted simultaneously
- ✓ Projects can be withdrawn any time (registered projects as well)
- ✓ Issuance done by governments

Guidelines for Developing Proposed Methodology

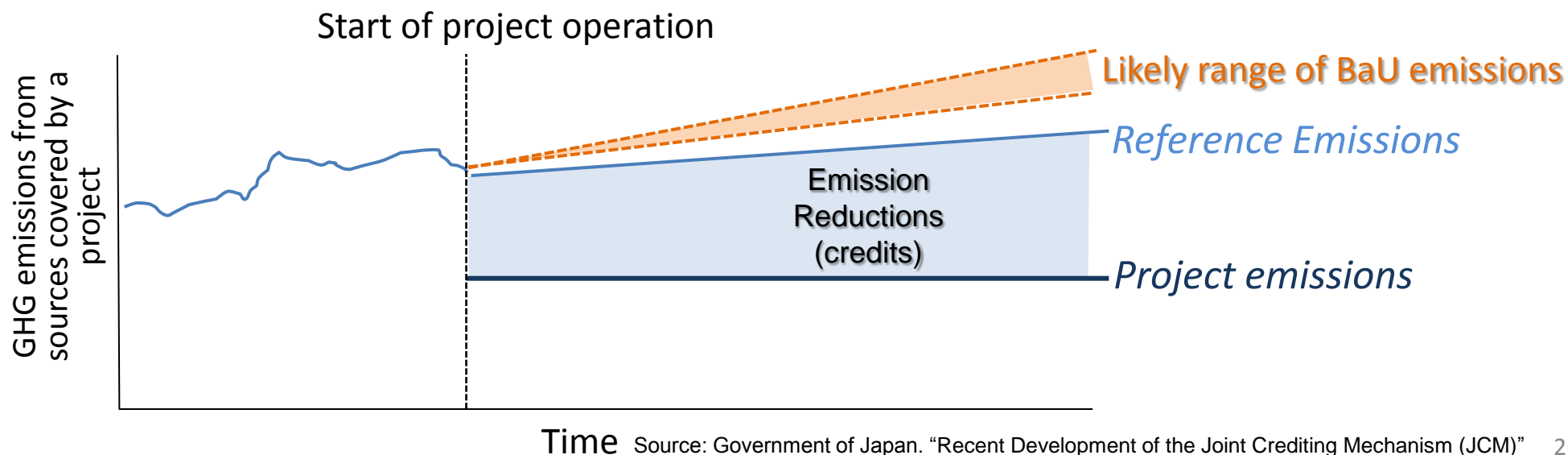
Methodology Guidelines

- ✓ These Guidelines give instructions on how to develop a methodology which contain:
 - Explanation of key concepts of the JCM
 - ✓ Reference emissions
 - ✓ Eligibility criteria
 - General guidance to methodology proponents on how to develop methodologies
 - Explanation on how to fill in the methodology form and spreadsheet

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

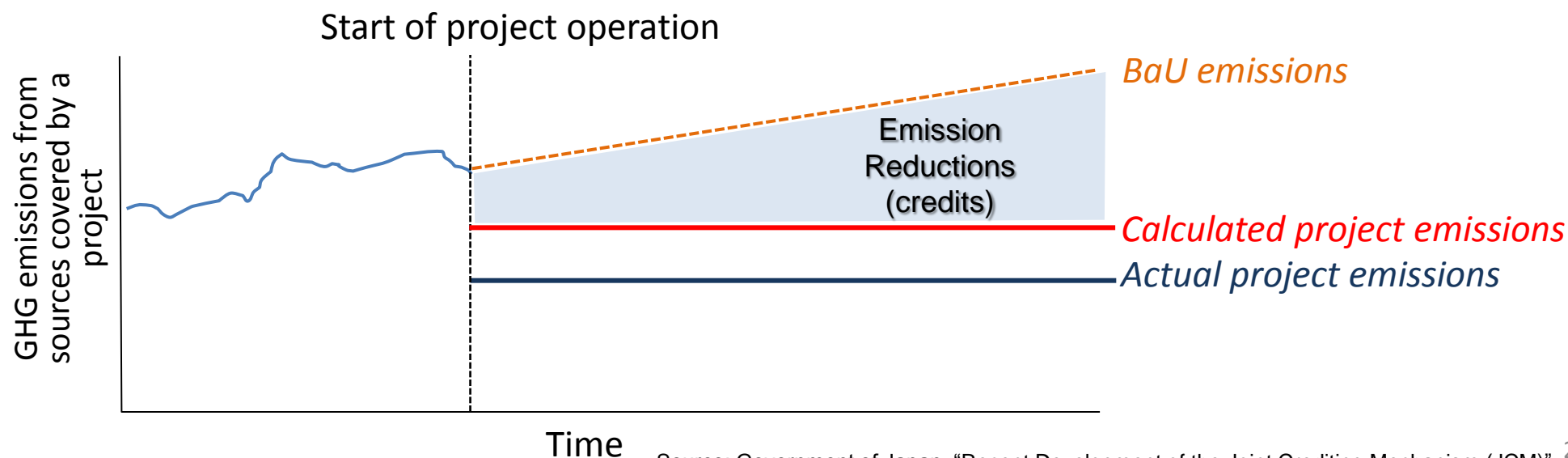
(Subject to further consideration and discussion with host countries)

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

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	<ul style="list-style-type: none">• Energy Management System is to be introduced in already existing buildings.
Criterion 2	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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

The image shows a multi-page document with several tables and text blocks. The tables contain technical specifications, monitoring parameters, and calculation formulas. The text blocks provide detailed descriptions of the methodology and monitoring procedures.

Monitoring Spreadsheet

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
2013-2014	(1)	PO ₁	Project production volume at the VHP ¹ 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 excel sheet electronically. Verified scales are installed and they are calibrated once a year. Verification and calibration shall meet international standards on corresponding monitoring devices. Project deputy managers double check the input data with logsheet every 6 months.	once a month	
	(2)	PFC ₁	Project fossil fuel consumption by the VHP	600	ty	Option B	purchase records	Collecting the purchase amount from meter invoices and routing it to an excel sheet manually. Project deputy managers double check the input data with invoices every 6 months.	once a month	
	(3)	PE ₁	Project electricity consumption by the VHP	600	kwh/ty	Option C	monitored data	Collecting electricity consumption data with verified calibrated electricity monitoring devices and routing to an excel sheet electronically. Verified monitoring devices are installed and they are calibrated once a year. Verification and calibration shall meet international standards on corresponding monitoring devices.	continuous	

Responsible personnel		Role
Project Manager		Responsible for project planning, implementation, monitoring results and reporting. Appointed to be in charge of approving the
Project Facility		
Operat		

CO ₂ emission reductions		Units
22,111	CO ₂ e	

Monitoring option	Description
Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
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: measured values)

- Monitoring Report Sheet
- Monitoring Structure Sheet
- Monitoring Plan Sheet

Cells for data & information input

Source: Government of Japan. "Recent Development of the Joint Crediting Mechanism (JCM)"

Difference from the CDM

Methodology Guidelines

- ✓ Reference emissions are set below BaU emissions
- ✓ Additionality demonstration is not required for PPs
 - Meth proponents need to demonstrate it for each methodology
- ✓ A monitoring plan/report is explained in spreadsheets which are provided by the scheme owner for PPs to fill in to calculate emission reductions
 - PPs (and TPEs) do not need to create (check) calculation formula in the spreadsheets

Guidelines for Developing PDD and Monitoring Report

PDD and Monitoring Guidelines

- ✓ These Guidelines give instructions on how to develop a Project Design Document (PDD) and monitoring report (MR) which contain:
 - General guidance to project participants on how to develop a PDD, conduct monitoring and fill in a MR
 - Detailed explanation on how to fill in the PDD form, how to conduct monitoring and how to fill in MR sheet

Guidelines for Developing PDD and Monitoring Report

● Main structure of the PDD and Spreadsheet

PDD

- A. Project description**
- B. Application of an approved JCM methodology(ies)**
- C. Calculation of emission reductions**
- D. Environmental impact assessment**
- E. Local Stakeholder consultation**
- F. References**
- Annex**

Spreadsheet

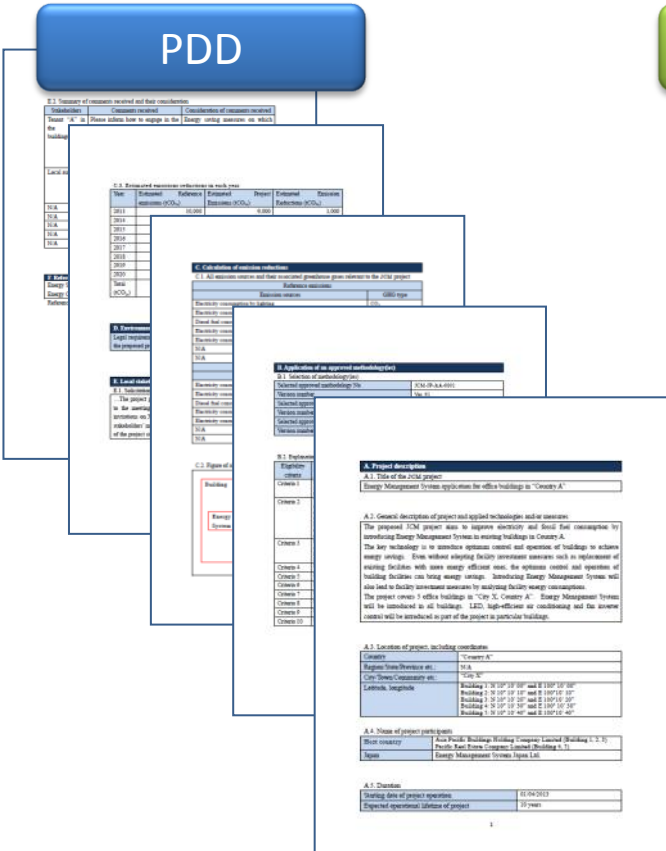
- **Monitoring Plan sheet**
 - ✓ **Input sheet**
- **Monitoring Structure sheet**

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 Structure Sheet	
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.
Operators	Appointed to be in charge of monitoring structure (data collection and storage), including

Monitoring Plan

Monitoring point No.	Parameters	Description of data	Estimated Values	Units	Monitoring option	Source of data	Measurement methods and procedures	Monitoring frequency	Other comments
(1)	PC _y	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 spreadsheet 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 8 months	once a month	
(2)	PFC _y	Project fossil fuel consumption by the HPIF	500	ty	option B	purchase records	- Collecting the purchase amount from retailer invoices and inputting it to an spreadsheet manually. - Project deputy managers double check the input data with invoices every 8 months	once a month	
(3)	PEC _y	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. - Verified monitoring devices are installed and they are calibrated once a year. - Verification and calibration shall meet international standard on corresponding monitoring devices.	continuous	

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

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.

Fields for data input (ex post)

Monitoring Report

Monitoring period

	(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 _y	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 a spread sheet electrically - 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)	PFC _y	Project fossil fuel consumption by the HPIF	500	ty	Option B	purchase records	- Collecting the purchase amount from retailer invoices and inputting it to a spread sheet manually - Project deputy managers double check the input data with invoices every 6 months	once a month	
5	N/A	3)	PEC _y	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 a spread sheet electrically - Verified monitoring devices are installed and they are calibrated once a year. - Verification and calibration shall meet international standard on corresponding monitoring devices.	continuous	
6	* HPIF refers to High-Performance Industrial Furnace.										
8	2. CO2 emission reductions										
10	CO2 emission reductions		Units								
11	22,851		1000ty								
14	[Monitoring option]										
15	Option A	Based on public data which is measured by entities other than the project participant used; publicly recognized data such as statistical data and specifications)									
16	Option B	Based on the amount of transaction which is measured directly using metering instrument used; commercial evidence such as invoices)									
17	Option C	Based on the actual measurement using metering instruments (Data used: measured									

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

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

Guidelines for Developing PDD and Monitoring Report

● Instructions in *italic*, example in red

A. Project description

A.1. Title of the JCM project

Energy Management System application for office buildings in Mongolia

Please indicate technology(ies) applied as well as sector that the project is implemented.

A.2. General description of project and applied technologies and/or measures

The proposed JCM project aims to improve electricity and fossil fuel consumption by introducing Energy Management System in existing buildings in Mongolia.

The key technology is to introduce optimum control and operation of buildings to achieve energy savings. Even without adopting facility investment measures such as replacement of existing facilities with more energy efficient ones, the optimum control and operation of building facilities can bring energy savings. Introducing Energy Management System will also lead to facility investment measures by analyzing facility energy consumptions.

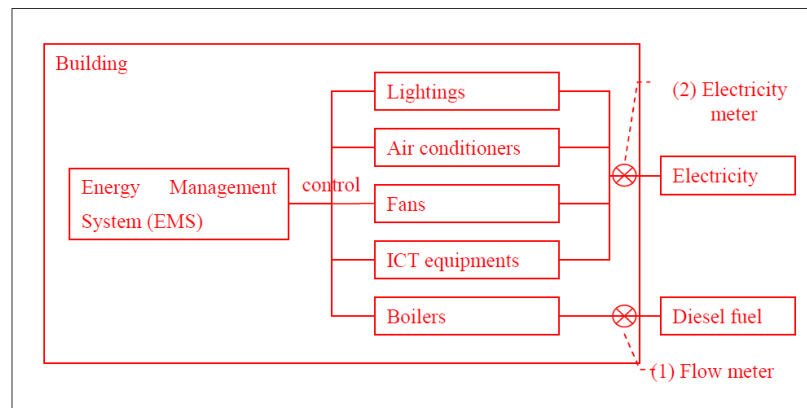
The project covers 5 office buildings in “City X”, Mongolia. Energy Management System will be introduced in all buildings. LED, high-efficient air conditioning and fan inverter control will be introduced as part of the project in particular buildings.

Please include in the description:

- The purpose of the project;
- Explanation of how the proposed project reduces greenhouse gas emissions (i.e. what type of technology is being employed, what measures are conducted as part of the project, etc).

A.3. Location of project, including coordinates

Country	Mongolia
Region/State/Province etc.:	N/A
City/Town/Community etc.:	“City X”
Latitude, longitude	Building 1: N 10° 10' 00" and E 100° 10' 00"



Please illustrate and describe all emission sources relevant to the project. Please also indicate all monitoring points for measurement with types of equipments to be installed for the proposed project in the figure. Each monitoring point for measurement should be indicated with monitoring point number(s) corresponding to the number of parameter listed in the Monitoring Plan Sheet.*

In selecting a monitoring point for measurement, the project participants should select the most suitable position in order to collect the accurate data. In many cases, the monitoring point for measurement corresponds to the position of the measuring equipment, however, when the amount of transaction is used to collect activity data, the receiving inlet of fuel at the factory/place of business operations such as a fuel tank serves as monitoring point. In addition, it is not always necessary for the emission source to correspond to the monitoring point in a one-to-one manner. It is possible to monitor the activity data of two or more sources at a point; it is also possible to monitor the activity data of one source at two or more points. In either case, monitoring points for measurements should be decided to increase the accuracy of measurement.

Guidelines for Developing PDD and Monitoring Report

● Guidance and example

4.2. Developing a Monitoring Plan

23. Project participants develop before validation a monitoring plan using Monitoring Plan Sheet and Monitoring Structure Sheet in the corresponding Monitoring Spreadsheet of the methodology applied.
24. Project participants input estimated values for each parameter in the Monitoring Plan Sheet including those fixed ex ante for parameters not to be monitored.
25. Project participants also describe the following items for each parameter specified in the Monitoring Plan Sheet in line with the applied methodology(ies). Project participants may add detailed information specific to the proposed project to the contents given in the applied methodology.
 - (a) Estimated values: Provide the estimated values of the parameter for the purpose of calculating emission reductions *ex ante*;
 - (b) Monitoring option: Select an option from below;
 - (i) Option A: Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications);
 - (ii) Option B: Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices);
 - (iii) Option C: Based on the actual measurement using measuring equipments (Data used: measured values).
 - (c) Source of data: Provide the source of data used or to be used. Clearly indicate the type of data source (e.g. logbooks, daily records, surveys, etc.) and spatial level of data (e.g. local, regional, national, international), if applicable;
 - (d) Measurement methods and procedures: Describe how the parameters are to be measured/calculated including Quality Assurance/Quality Control (hereinafter referred to as "QA/QC") procedures applied. If the parameter will be measured, describe the equipments to be used to measure it, including details on accuracy level, and calibration information (frequency, date of calibration and validity) in line with section 4.3 below;
 - (e) Monitoring frequency: Describe the monitoring frequency (e.g. continuously, annually).
26. The project participants ensure that data monitored and required for verification and issuance be kept and archived electronically for two years after the final issuance of credits.
27. In the Monitoring Structure Sheet, the project participants describe the operational and management structure to be implemented in order to conduct monitoring. The project

Monitoring Plan Sheet (input sheet) [Attachment to Project Design Document]

Table 1: Parameters to be monitored *ex post*

(a) Monitoring point No.	(b) Parameters	(c) Description of data	(d) Estimated Values	(e) Units	(f) Monitoring option	(g) Source of data	(h) Measurement methods and procedures	(i) Monitoring frequency	(j) Other comments
(1)	PFC _{o,y}	Project diesel fuel consumption during the period of year y	5,000	kl/y	Option B	purchase records	- Collecting purchase amount from retailer invoices and inputting to a spreadsheet manually - Project deputy managers double check the input data with invoices every 6 months	once a month	
(2)	PEC _y	Project electricity consumption during the period of year y	10,000	MWh/y	Option C	monitored data	- Collecting electricity consumption data with validated/calibrated electricity monitoring devices and inputting to a spreadsheet electrically - Verified monitoring devices are installed and they are calibrated once a year. - Verification and calibration shall meet international standard on corresponding monitoring devices.	continuous	
(3)	PFC _{L,y}	Project LPG consumption during the period of year y	0	t/y	N/A	N/A	N/A	N/A	N/A
(4)	PFC _{N,y}	Project natural gas consumption during the period of year y	0	1000Nm ³ /y	N/A	N/A	N/A	N/A	N/A
(5)	PFC _{K,y}	Project kerosene consumption during the period of year y	0	kl/y	N/A	N/A	N/A	N/A	N/A

Table 2: Project-specific parameters to be fixed *ex ante*

(a) Parameters	(b) Description of data	(c) Estimated Values	(d) Units	(e) Source of data	(f) Other comments
EER _{office}	Percentage of improvement in energy consumption efficiency for [Office Building] using BEMS	22	%	Past records of 30 similar size office buildings for the period of 2008-2012 measured by the project participant, BEMS provider. Data set of each building has the data of before and after BEMS implementation at least for one year respectively.	

Table 3: *Ex-ante* estimation of CO₂ emission reductions

CO ₂ emission reductions	Units
1,945	tCO ₂ /y

[Monitoring option]

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

Difference from the CDM

PDD and Monitoring Guidelines

- ✓ As PPs are not required to set a baseline scenario/ emissions, demonstrate additionality and explain ER calculation, PDD and monitoring plan are simplified

Guidelines for Validation and Verification

VV Guidelines

- ✓ These Guidelines give instructions on how to evaluate a proposed JCM project and review monitored results of GHG emission reductions of a registered JCM project and contain:
 - Requirements for validation
 - Requirements for verification

Guidelines for Validation and Verification

● Main structure of the VVG

Validatoion

- PDD form
- Project description
- Application of approved methodology(ies)
- Emission sources and ER
- EIA
- Local stakeholder consultation
- Monitoring
- Public inputs
- Modalities of communications
- Avoidance of double registration
- Start of operation

Verification

- Project implementation with the Eligibility Criteria
- Project implementation against the PDD
- Calibration frequency and correction of measured values
- Data and calculation of GHG ER
- Avoidance of double registration
- Post registration changes

Difference from the CDM

VV Guidelines

- ✓ TPEs are not required to assess:
 - Baseline identification
 - Additionality demonstration including prior consideration
 - Calculation formula in relevant fields of spreadsheets

Guidelines for Designation as a Third-Party Entity

TPE Guidelines

- ✓ These Guidelines explain requirements for designation of TPEs which contain:
 - Procedure for TPE designation
 - Requirements for designation as a TPE
 - Conditions for suspension or withdrawal of TPEs
 - Procedure for reinstatement of TPEs

Guidelines for Designation as a Third-Party Entity

● Requirements for designation as a TPE

ISO 14065

- ✓ An entity accredited under ISO 14065 by an accreditation body that is a member of the International Accreditation Forum based on ISO 14064-2
- ✓ Sectoral scopes: decided by the JC

DOE

- ✓ A DOE (Designated Operational Entity) of the Clean Development Mechanism
- ✓ Sectoral scopes: use scopes of DOEs

- ✓ A TPE has sufficient knowledge of the JCM by reading and knowing all applicable rules and guidelines of the JCM

Difference from the CDM

TPE Guidelines

- ✓ The Joint Committee does not accredit entities
- ✓ Designation of TPEs relies on external standards such as the accreditation standard of the CDM and ISO