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# How validation and verification work in JCM

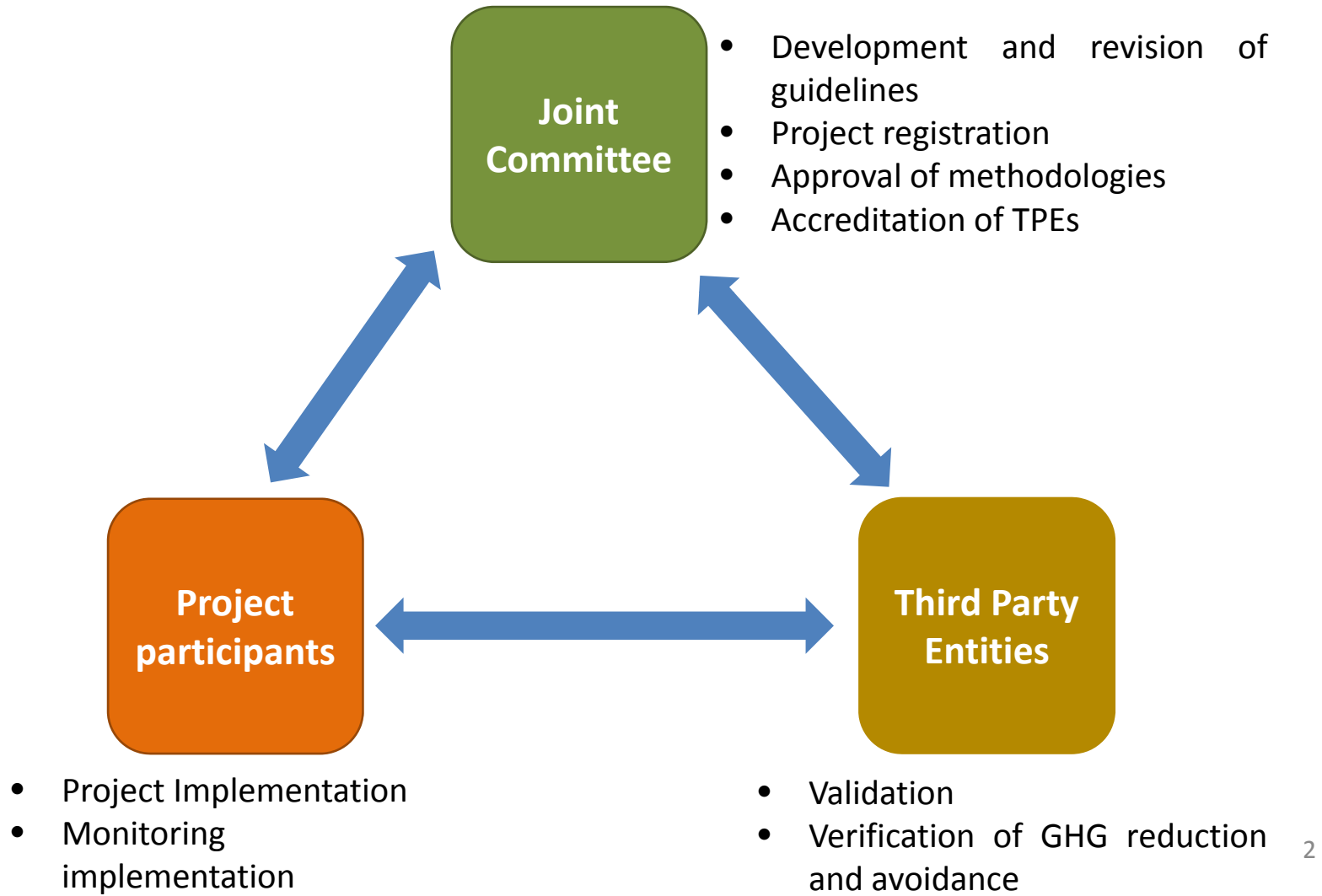
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22 January 2014

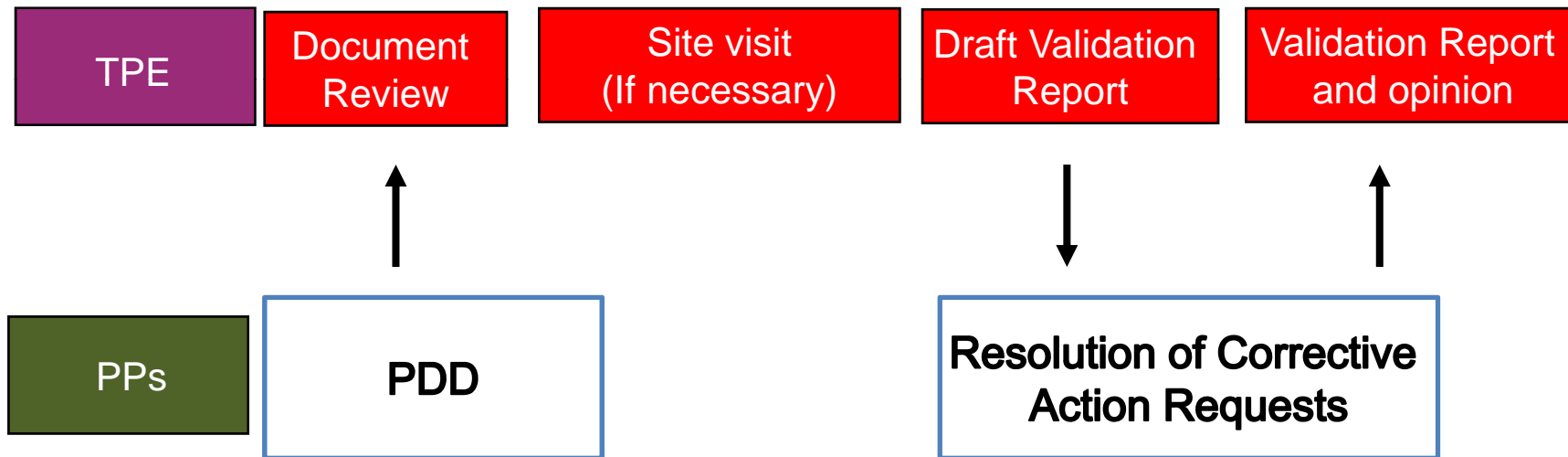
Kenta Usui

Climate and Energy Area, IGES

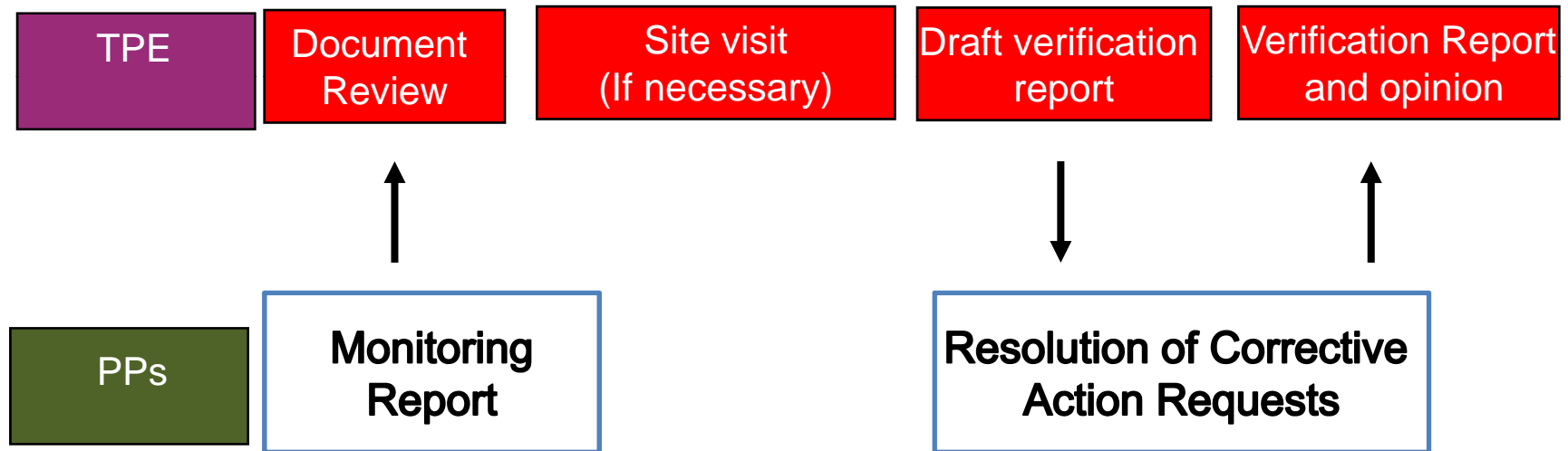
# TPE is a “quality-keeper” in JCM



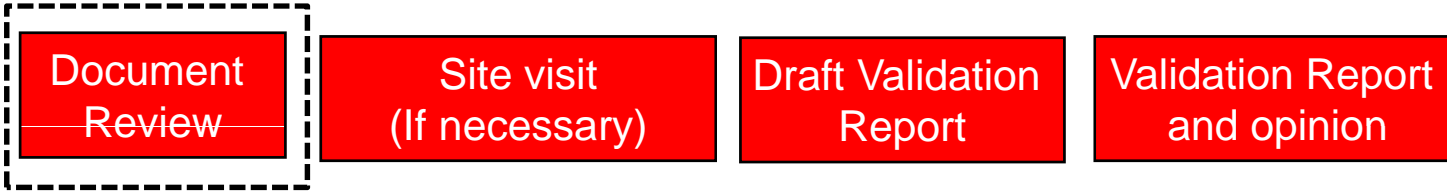
# Validation



# Verification



- Good monitoring and monitoring report are important for smooth verification.
- Validation ensures that monitoring plan is accurate and feasible.



- Check **Project Design Document** including **Monitoring Plan**

**Joint Crediting Mechanism Project Design Document Form**

**A. Project description**

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

Country: \_\_\_\_\_  
 Region/State/Province etc.: \_\_\_\_\_  
 City/Town/C. community etc.: \_\_\_\_\_  
 Latitude, longitude: \_\_\_\_\_

A.4. Name of project participants

Indonesia: \_\_\_\_\_  
 Japan: \_\_\_\_\_

A.5. Duration

Starting date of project operation: \_\_\_\_\_  
 Expected operational lifetime of project: \_\_\_\_\_

A.6. Contributions from developed countries

**PDD**

- A. Project Description
- B. Application of approved methodology
- C. Emission Reduction
- D. Environmental impact assessment
- E. Local stakeholder consultation
- Others,

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

**Table 1. Parameters to be monitored by project**

Monitoring point No.	Parameters	Description of data	Estimated Values	Units	Measurement option	Source of data	Measurement methods and procedures	Monitoring frequency	Other comments
(1)	FFCO <sub>2</sub>	Project diesel fuel consumption during the period of year y	0.000	kg	Option B	purchase record	Collecting purchase amount from retailer invoices and paying it to a spreadsheet manually. Project daily managers should check the input data with common sense frequently.	once a month	
(2)	FFC <sub>e</sub>	Project electricity consumption during the period of year y	10.000	MWh/y	Option C	metered data	Collecting electricity consumption data with meter/multimeter reading, recording, photos and paying it to a spreadsheet manually. Confirmation on a year. Verification and calibration shall meet international standard on corresponding measuring devices.	continuous	
(3)	FFCO <sub>2</sub>	Project LPG consumption during the period of year y	0.000	kg	N/A	N/A	N/A	N/A	N/A
(4)	FFCO <sub>2</sub>	Project natural gas consumption during the period of year y	0.000	kg	N/A	N/A	N/A	N/A	N/A
(5)	FFCO <sub>2</sub>	Project kerosene consumption during the period of year y	0.000	kg	N/A	N/A	N/A	N/A	N/A

**Table 2. Project specific parameters to be monitored by project**

Parameters	Description of data	Estimated Values	Units	Source of data	Other comments
SEER <sub>max</sub>	Percentage of improvement in energy consumption efficiency for Office Building using BEMS	22%	%	the records of the control use office buildings for the period of 2009-2010 measured by the project participant, BEMS provider. Start of smart building for the date of before and after BEMS implementation at least for one year respectively.	

**Table 3. Ex-ante estimation of CO<sub>2</sub> emission reductions**

CO <sub>2</sub> emission reductions	Units
1.245	ktCO <sub>2</sub>

**Monitoring option:**

Option A: Based on public data open to be accessed by anyone who has the project participants' (State, local, private) legitimate data such as internet sites and publications.

Option B: Based on the amount of purchase receipts, receipts check, utility measuring equipment, data and commercial system such as metering.

Option C: Based on the data measuring using measuring equipment, data and commercial system such as metering.

**Monitoring sheet (as a part of attachment)**  
 Excel sheet for Monitoring and calculation

# 11 Check points for validation

## **A: Generic (5)**

Related to general feature of projects

## **B: Methodology-specific (3)**

Checking consistency with applied methodology

## **C: Outreach (3)**

Consultation with a range of stakeholders

# A: Generic

Item	Key questions
6.2 Project Design Document form	<ul style="list-style-type: none"><li>- Is the PDD using the latest form?</li><li>- Is PDD written in line with PDD and Monitoring guidelines?</li></ul>
6.3 Project description	<ul style="list-style-type: none"><li>- Is the PDD accurate, complete and understandable?</li></ul>
6.10 Modalities of communications	<ul style="list-style-type: none"><li>- TPE validates corporate identify of project participants and a focal point.</li><li>- Is the Modalities of Communication (see form) correctly completed and authorised?</li></ul>
6.11 Avoidance of double registration	<ul style="list-style-type: none"><li>- Is the proposed project NOT registered under other international climate mitigation mechanisms (e.g. CDM)?</li></ul>
6.12 Start of operation	<ul style="list-style-type: none"><li>- Is the project starting in/after 2013?</li></ul>

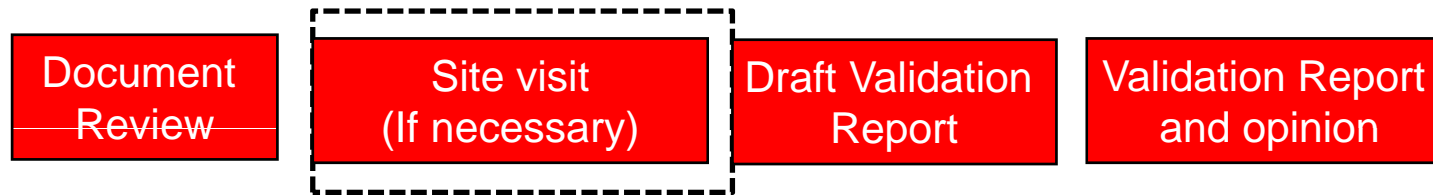
# B:Methodology-specific

Item	Key questions
6.4 Application of approved methodologies	<ul style="list-style-type: none"><li>- Is the project eligible for selected methodology?</li><li>- Is the methodology up-to-date?</li></ul>
6.5 Emission sources and calculation if emission reductions	<ul style="list-style-type: none"><li>- Are all GHG sources covered by the methodology addressed to calculate project and reference scenarios?</li><li>- If the project proposes pre-fixed values (which does not require monitoring), are they appropriate?</li></ul>
6.8 Monitoring	<ul style="list-style-type: none"><li>- Is the monitoring plan based on the approved methodologies, PDD and monitoring guidelines?</li><li>- Are monitoring points for measurement appropriate?</li><li>- Are monitoring equipment appropriate?</li></ul>



# C:Outreach

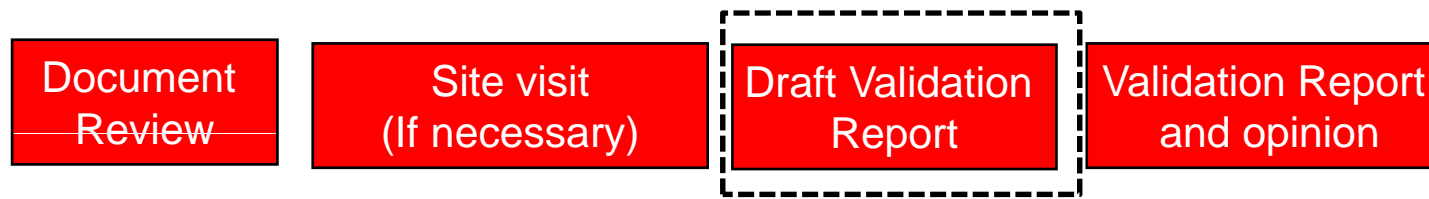
Item	Key questions
6.6 Environmental impact assessment	- Have project participants conducted an EIA according to Mongolian laws?
6.7 Local stakeholder consultation	- Were local stakeholders consulted?
6.9 Public inputs	- Are all public inputs to the PDD taken into account by project participants?



- TPE visit the actual project site and interview relevant stakeholders
- Sometimes conducted by phone
- May need to create “Interview Plan”,

# Example of interviewees

1. Project proponent
  - Technical implementation
  - Financing
  - Monitoring
2. Operators
  - Grid network
  - Electric power mix in the future
  - Grid carbon emission factor
3. NGOs
  - Environmental and social issues



- Draft the validation report, clarifying points that project participant need to address.
- (See the form).

# Three types of “Requests”

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## **Corrective Action Request (CAR)**

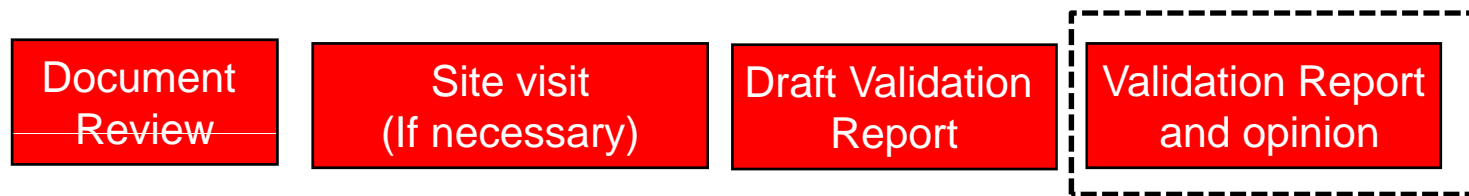
- There is a mistake
  - Validation/verification requirements are not met
  - Risk that emission reductions cannot be calculated
- 

## **Clarification Request (CL)**

- Provided information is not sufficient or unclear
- 

## **Forward Action Request (FAR)**

- Review is required at the first or next verification
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## Validation Report



- The result of validation (positive/negative)
- Means of validation, findings (CAR, CL, FAR), and conclusion based on reporting requirements
- Information on public inputs
- List of interviewees and documents received
- Information on what PP has done to resolve issues identified by TPE.

