# Opportunities, challenges, and expectations on the JCM in Mongolia

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Nature conservation Fund as the Secretariat of the JCM
Ministry of Environment, Green Development and Tourism

# Current status of JCM in Mongolia

**Road to "LCDP"**

Governmental consultation
(Ulaanbaatar -3 July 2012 )

Governmental consultation
(Tokyo -1 November 2012 )

Governmental consultation
(Doha -30 November 2012 )

Joint Statement
(Doha -6 December 2012)

**Signing of the "Low Carbon Development Partnership" (bilateral document for the JCM)**

(Ulaanbaatar- 8 January 2013 )

**Start of "JCM"**

**JCM first Joint Committee meeting**
**(Ulaanbaatar - 11 April 2013 )**

**JCM second Joint Committee meeting**
**(Ulaanbaatar - 20 February 2014 )**

**JCM third Joint Committee meeting**
**(Ulaanbaatar - 30 June 2015 )**

**Joint Committee**

| Mongolia | Japan |
|---|---|
| Co-Chair | Co-Chair |
| Members (7 Ministries and UB City Authority) | Members (2 Ministries and Japanese Embassy in Mongolia) |
| Secretariat | Secretariat |
| Observers | Observers |

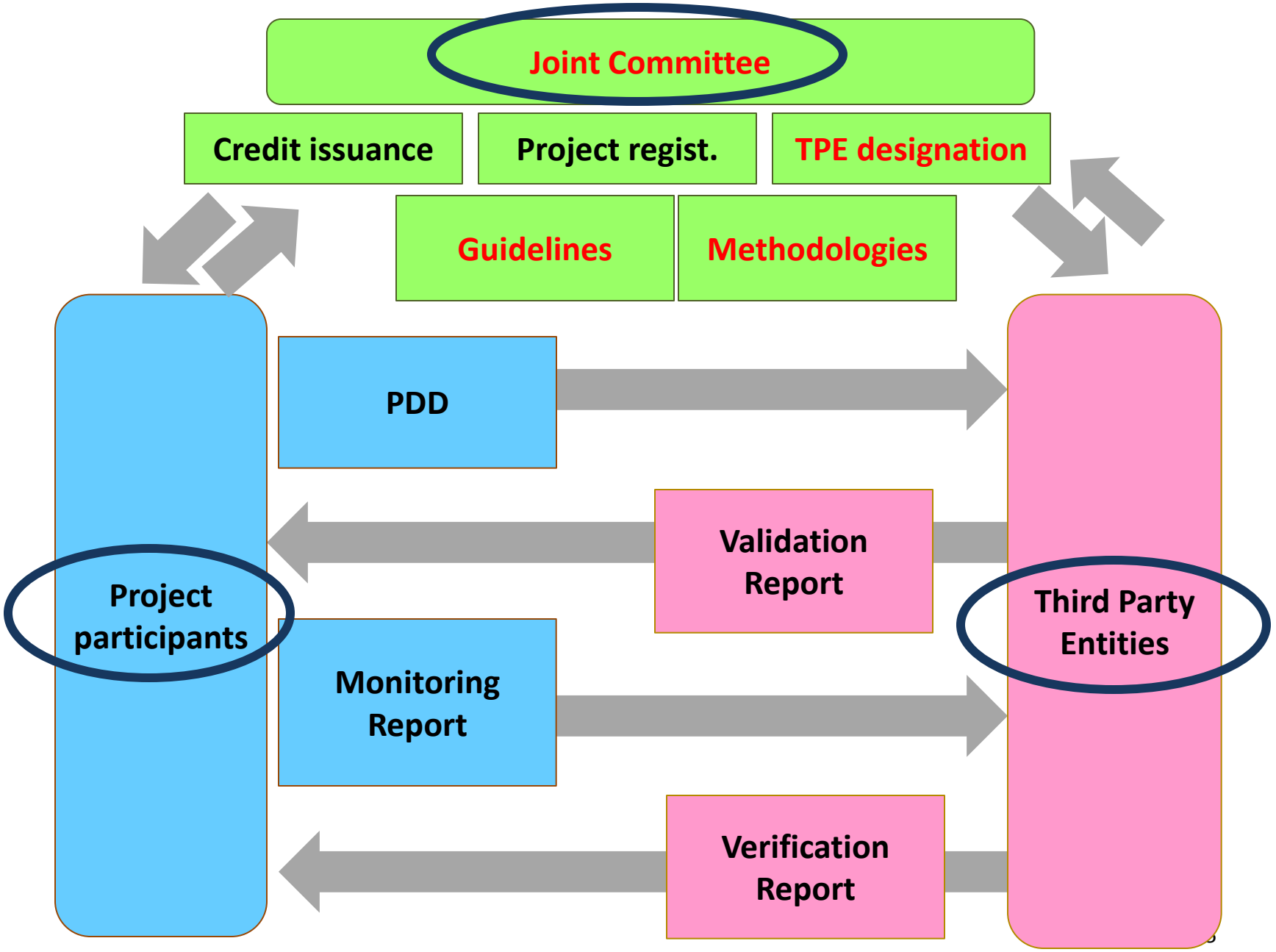
# JCM PROJECTS in MONGOLIA (2013-2014)

| Project type | Project title | Sector scope | Support |
|---|---|---|---|
| Model project | Upgrading and Installation of Centralized Control System of High-Efficiency Heat Only Boiler | Energy (EE) | MoEJ/GEC |
| Project Planning Study (PS) | 10MW-scale Solar Power Plant and Rooftop Solar Power Generation System | Energy (RE) | MoEJ/GEC |
| Feasibility Study (FS) | Improvement of Thermal Insulation and Water Cleaning/Air Purge at Power Plant | Energy (EE) | MoEJ/GEC |
| | 10MW-scale Solar Power Generation for Stable Power Supply | Energy (RE) | MoEJ/GEC |
| | Energy conservation at cement plant | Energy (EE) | MoEJ/GEC |
| | GHG emission reduction by introducing an energy-efficient complex in Ger area of Ulaanbaatar | Energy (EE) | METI/NEDO |
| | Research on developing projects on wind power generation | Energy (RE) | METI/NEDO |
| Demonstration and verification project | High efficiency and low loss power transmission and distribution system in Mongolia | Energy (EE) | METI/NEDO |

# JCM PROJECTS in MONGOLIA (2014-2015)

| Project type | Project title | Sector scope | Supporter |
|---|---|---|---|
| JCM Project Planning Study (PS) | 10MW-scale Solar Power Generation for Stable Power Supply - Taishir | Energy (RE) | MoEJ/GEC |
| Large Scale JCM Feasibility Study | Study for the development of JCM projects for comprehensive improvements in the power generation, transmission and distribution systems in Ulaanbaatar City and on the possibility of nationwide horizontal application of the same improvement model in Mongolia | Energy (EE) | MoEJ/GEC |
| | Feasibility study on a programme-type finance scheme for the JCM in Mongolia | - | MoEJ/IGES |
| JCM Feasibility Study (FS) | Efficiency Improvement of Combined Heat and Power Plant by Thermal Insulation | Energy (EE) | MoEJ/GEC |
| | Reduction of CO2 emission by utilizing fly ash as cement substitute in Mongolia | Waste handling and disposal | METI/NEDO |
| | GHG reduction by methane fermentation of sewage sludge and food waste in Ulaanbaatar | Waste handling and disposal | MoEJ/Waste management and recycling department |
| | Distributed heat supply system using biomass and coal mixture combustion type boiler | Waste Management /Biomass Utilisation | MoEJ/GEC |
| FS and Demo project | Co-benefit project for Heat Only Boiler | Energy (EE) | MoEJ/International Cooperation Office/OECC |

# JCM stakeholders



# Joint Committee

## Mongolia

- Co-Chair (MEGD)
- Members (7 Ministries and UB City Authority)
- Secretariat (MEGD)

## Japan

- Co-Chair (MoFA)
- Members (2 Ministries and Japanese Embassy in Mongolia)
- Secretariat (Mitsubishi UFJ Research and Consulting

## Observers

- (Clean Air Fund and National Renewable Energy Center)
- (IGES, OECC, GEC, NEDO and JICA )

# Joint Committee (JC) of Mongolia

| | Organization | JC member | Alternate JC member | Co-Chair | Technical focal point | JCM secretariat |
|---|---|---|---|---|---|---|
| | Ministry of Environment and Green Development | | | Z.Batjargal | Ts.Gerelt-Od | Kh.Undarmaa<br>L.Otgontsetseg |
| 1 | Ministry of Foreign Affairs | D.Batjargal | B.Gereltsetseg | | | |
| 2 | Ministry of Industry and Agriculture | B.Manansan | I.Bold | | | |
| 3 | Ministry of Mining | L.Radnaasuren | D.Otgonlkhagva | | | |
| 4 | Ministry of Road and Transport | U.Odgerel | Ts.Bayarjargal | | | |
| 5 | Ministry of Construction and Urban Development | U.Otgonbayar | Yu.Dorjpagma | | | |
| 6 | Ministry of Energy | B.Tovuudorj | M.Tumenjargal | | | |
| 7 | UB City authority | Kh.Galimbek | N.Nasanjargal | | | |

*Need to newly establish

# Approved documents for the JCM by JC

| | | Rules and Guidelines |
|---|---|---|
| Overall | | •Rules of Implementation<br>•Project Cycle Procedure<br>•Glossary of Terms<br>•Guidelines for Designation as a Third Party Entity (TPE guidelines) |
| Joint Committee | | •Rules of Procedures for Joint Committee (JC rules) |
| Methodology | | •Guidelines for Developing Proposed Methodology (methodology guidelines) |
| Project procedure | Developing a PDD | •Guidelines for Developing Project Design Document and Monitoring Report (PDD and monitoring guidelines)<br><br>•Guidelines for Validation and Verification (VV guidelines) |
| | Monitoring | |
| | Validation | |
| | Verification | |

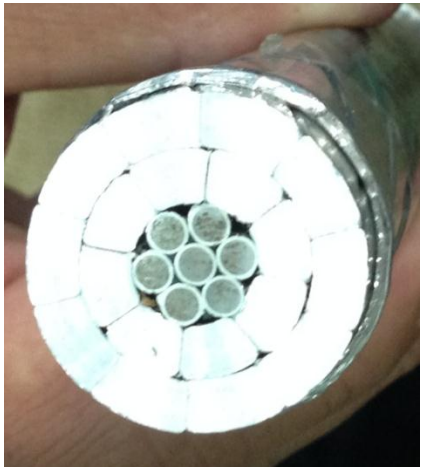
# Approved templates for the JCM by JC

| | Templates |
|---|---|
| Methodology | •Proposed Methodology Form<br>•Approved Methodology Revision Request Form |
| Project Planning | •Project Design Document Form<br>•Project Registration Request Form<br>•Proposed Methodology Spreadsheet Form<br>•Modalities of Communication Statement Form |
| Project Implementation | •Post-Registration Changes Request Form<br>•Registration Request Withdrawal Form<br>•Project Withdrawal Request Form<br>•Credits Issuance Request Form<br>•Issuance Request Withdrawal Form |
| TPE | •Application Form for Designation as a Third Party Entity<br>•Validation Report Form<br>•Verification Report Form |

# Approved Methodology

MN_AM001 (20 Feb, 2014)

Installation of energy-saving transmission lines in the Mongolian Grid“



MN_AM002 (30 Jan, 2015)
Replacement and Installation of High-Efficient Heat Only Boilers (HOBs) for Hot Water Supply Systems

# Designated Third Party Entities (TPEs)

| Number | Name | Sectoral scopes for validation | Sectoral scopes for verification | Designated date | Comments |
|---|---|---|---|---|---|
| TPE-MN-011 | TUV Rheinland (China) Ltd | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 | 09 Sep 14 | |
| TPE-MN-010 | KBS Certification Services Pvt. Ltd. | 1, 3, 4, 5, 7, 12, 13, 15 | 1, 3, 4, 5, 7, 12, 13, 15 | 15 Jan 14 | |
| TPE-MN-009 | SGS United Kingdom Limited | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15 | 15 Jan 14 | |
| TPE-MN-008 | TÜV SÜD South Asia Private Limited | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 | 24 Dec 13 | |
| TPE-MN-007 | Lloyd's Register Quality Assurance Limited | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 | 05 Dec 13 | |
| TPE-MN-006 | Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15 | 05 Dec 13 | |
| TPE-MN-005 | JACO CDM., LTD | 1, 3, 13, 14 | 1, 3, 13, 14 | 16 Oct 13 | **withdrawn** |
| TPE-MN-004 | Japan Management Association | 1, 2, 3, 4, 6, 8, 9, 14 | 1, 2, 3, 4, 6, 8, 9, 14 | 24 Sep 13 | |
| TPE-MN-003 | Japan Quality Assurance Organization | 1, 3, 4, 5, 11, 13, 14 | 1, 3, 4, 5, 11, 13, 14 | 24 Sep 13 | |
| TPE-MN-002 | Japan Consulting Institute | 1,2,4,5,9,10,13 | 1,2,4,5,9,10,13 | 24 Sep 13 | **withdrawn** |
| TPE-MN-001 | URS Verification Private Limited | 1, 13 | 1, 13 | 24 Sep 13 | |

# National TPE development

Capacity buildings are organized by MEGD and IGES for potential TPE candidates in Mongolia

| Instructor | Title | Date |
|---|---|---|
| Shigenari Yamamoto (JQA) | Seminar on “Required competences for self-implementation of JCM Validation/verification activities by Mongolian people “ | 28 Oct 2013 |
| Kenta Usui (IGES) | Training on “Validation for JCM “ | 22 Jan 2014 |
| Tsuyoshi Nakao (ERM) | Training on “Validation/verification for JCM” | 3-5 Mar 2015 |
| Tsuyoshi Nakao (ERM) | Training on “Validation/verification for JCM” | 10-11 Nov 2015 |

Initial result

National Renewable Energy Center is accredited under ISO 14065 by an accreditation body (MASM) based on ISO14064-2. Accredited sector scopes are energy industries, energy distribution and energy demand.

Advantages

Cost, time, local circumstances knowledge etc.,

# Cooperation with National Accreditation Body

*Mongolian Agency for Standardization and Metrology (MASM) is accreditation body of Mongolia.

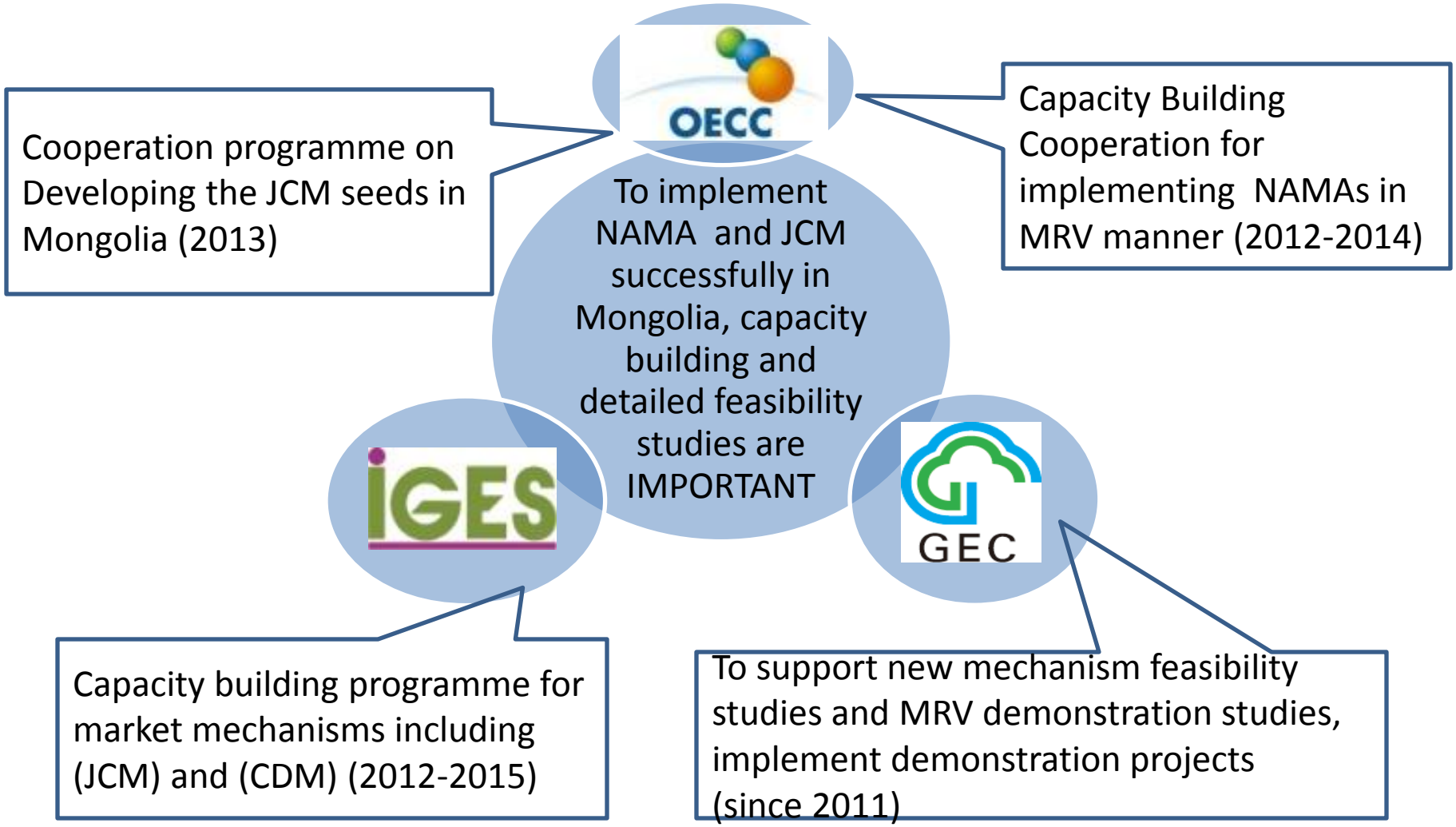
1. Approval of GHG standards into Mongolian standard

| Standard code | Standard title | Standard code of Mongolia |
|---|---|---|
| *ISO 14064-1* :2006 | Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals | MNS: 14064-1: 2006 (translation revising) |
| *ISO 14064-2:2006* | Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements | MNS: 14064-2: 2006 (translation revising) |
| •*ISO 14064-3:2006* | Specification with guidance for the validation and verification of GHG assertions | Will be approved in 2015 |
| *ISO 14065:2013 (second edition)* | Requirements for GHG validation or verification bodies | MNS : 14065:2013 |
| *ISO14066:2011 (complement of ISO14065)* | Competence requirements for GHG validation teams and verification teams | Will be approved in 2015 |

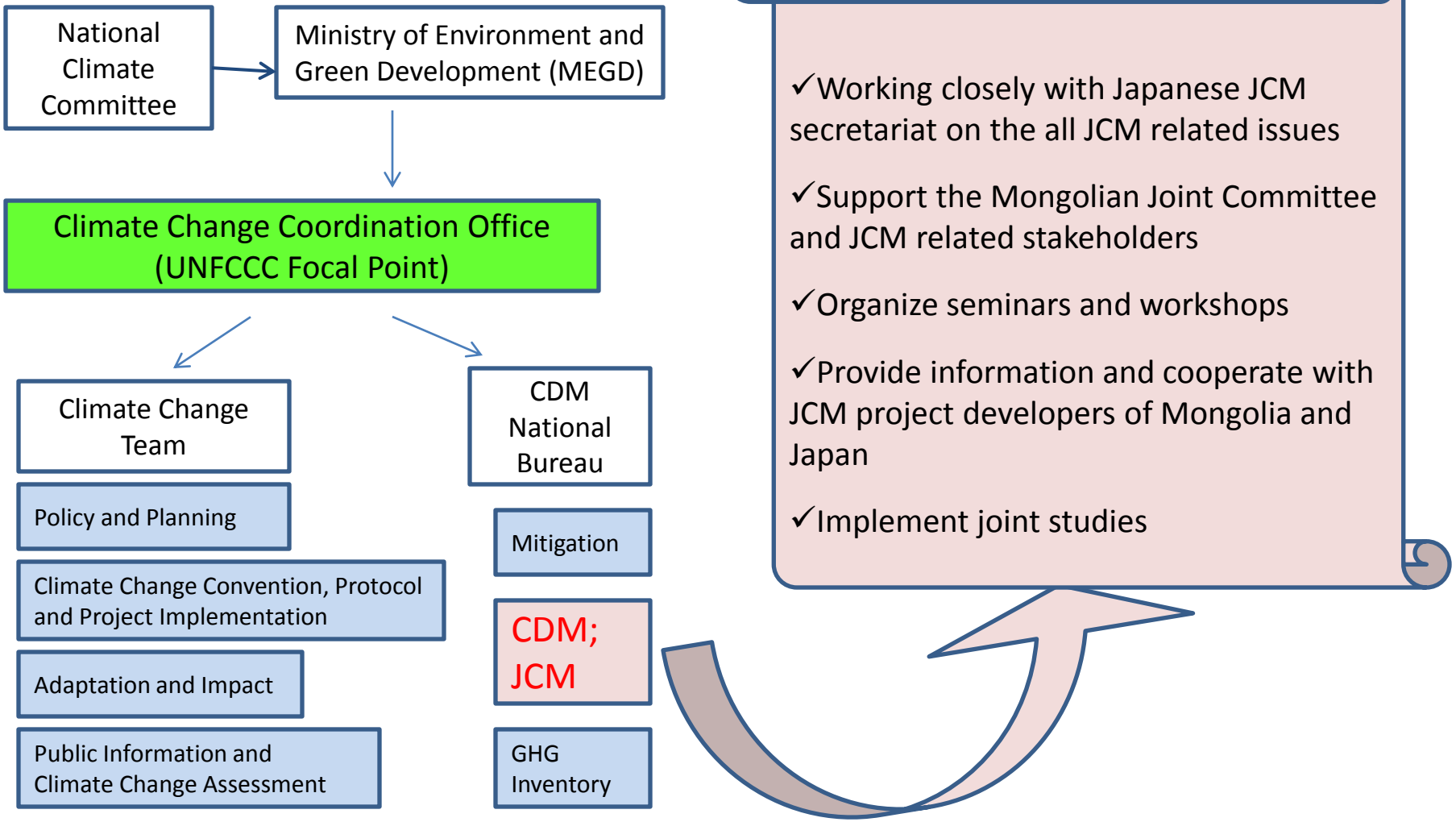
2. GHG training program for ISO14065 IGES Capacity building activities on MASM (Sep 2014; with Japan Accreditation Board –JAB)

3. First national entity is accredited under ISO 14065 by an accreditation body (MASM) based on ISO14064-2

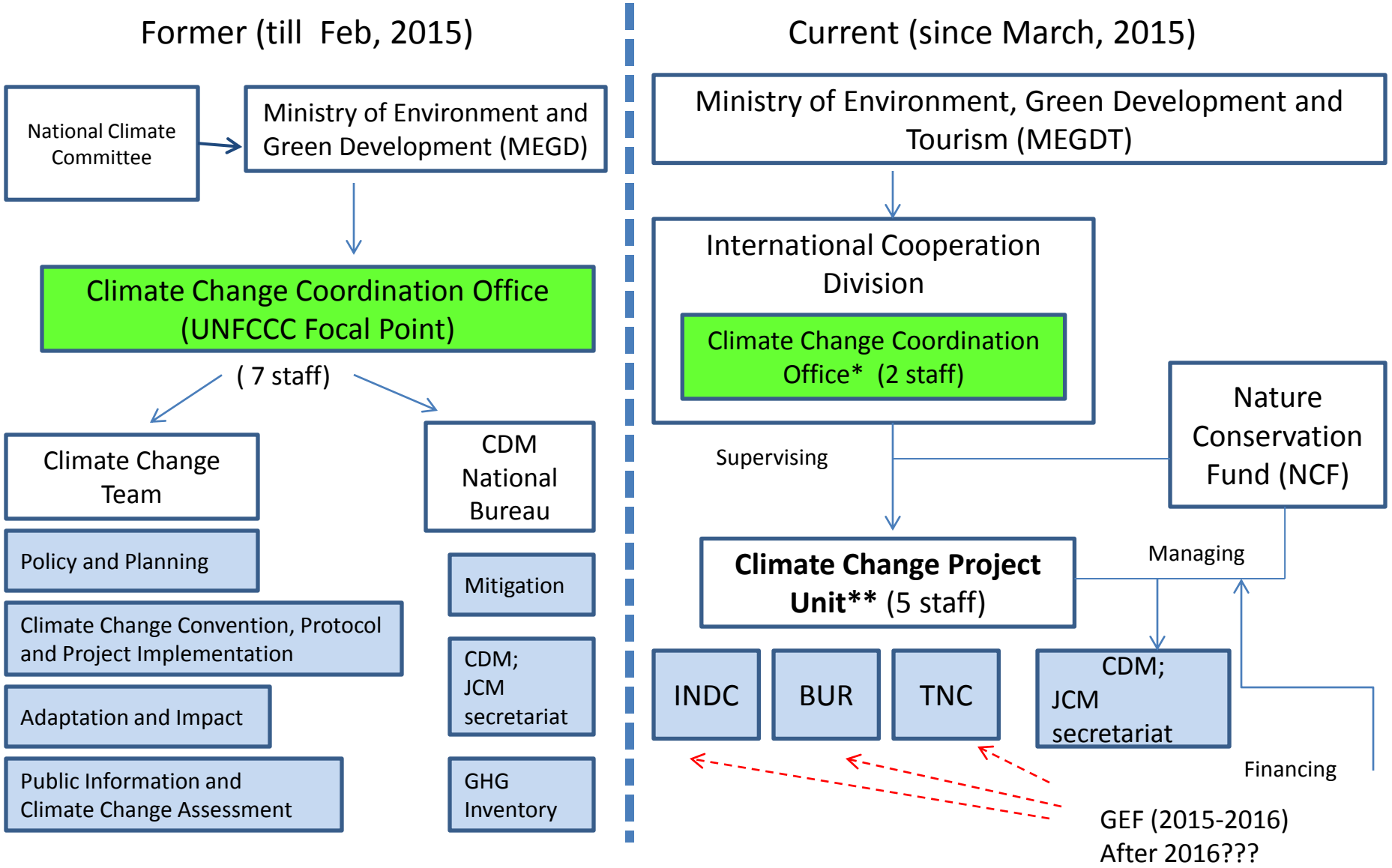
# Capacity Building : Bilateral cooperation with Ministry of Environment, Japan



# JCM secretariat activities



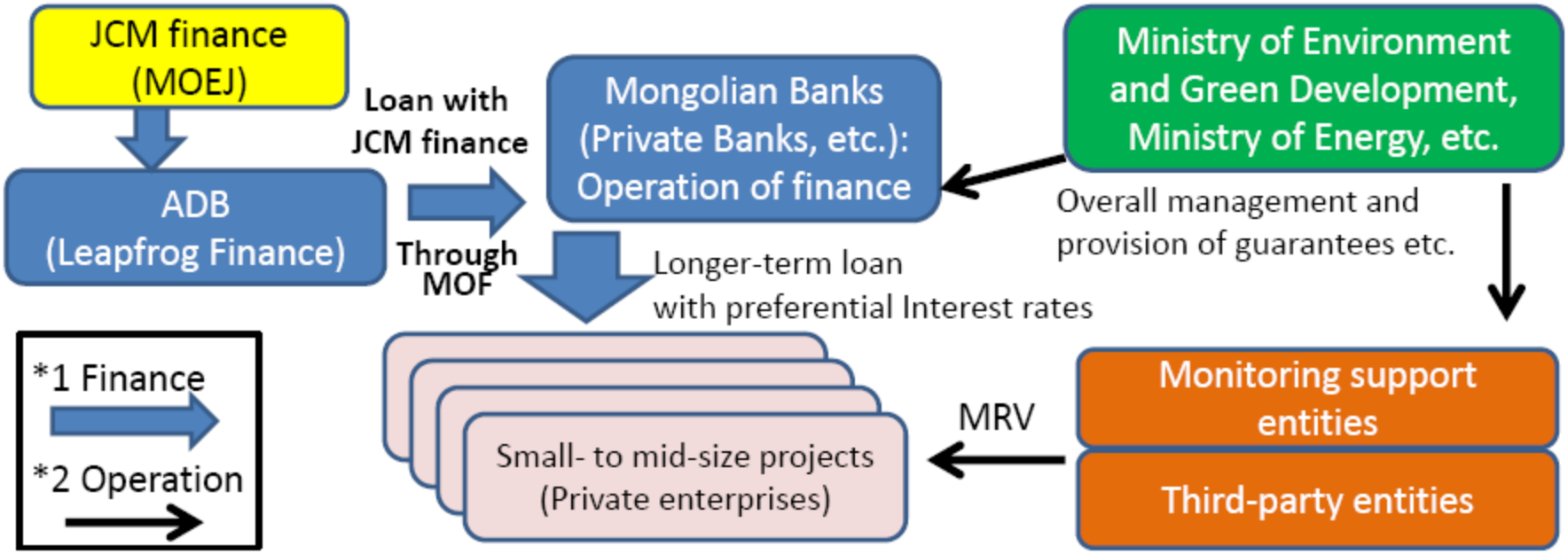
# Changes in Institutional arrangement for climate change issue



# Feasibility study on a programme-type finance scheme for the JCM in Mongolia

## 1. Project Outline

The proposed study will be carried out in order to design a programme-type finance scheme for the JCM with the use of the JCM leap-frog finance and in partnership with local banks that will facilitate the implementation of small- to middle-scale JCM projects




The use of government guarantees and JCM finance will enable the introduction of advanced Japanese technologies with the use of longer-term loan with preferential interest rates.

**Advantages to the proposed finance scheme**:

* It will enable the introduction of Japanese technologies tailored to the needs of Mongolia.
* Local entities will effectively manage a number of small- to middle-scale projects.



Source: OECC, Feb 2015

# Challenges related to implementing JCM

- Technical barriers (e.g. methodology development, monitoring, validation and verification)
- Institutional barriers (e.g. lack of information, inter-ministerial coordination  etc)
- Financial barriers (e.g. upfront investment, appropriate financing scheme)
- Finding appropriate partners is challenging (Japanese and Mongolian)

# JCM Model Projects by MOE

*The budget for FY 2015*
*2.4 billion JPY (approx. **USD24 million**) per year by FY2017*
*(total 7.2 billion JPY)*

**Government of Japan**

Finance part of an investment cost (**up to the half**)

Conduct MRV and expected to deliver at least half of JCM credits issued

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



- Scope of the financing: facilities, equipment, vehicles, etc. which reduce $CO_2$ from fossil fuel combustion as well as construction cost for installing those facilities, etc.
- Eligible Projects : starting installation after the adoption of the financing and finishing installation within three years.

Source: MoEJ, Oct 2014

# JCM implementation will and expectations

- ✓ Support Mongolian and Japanese effort in reducing GHG emission and achieving target
- ✓ Encourage low carbon development
- ✓ Promote green investment and technology transfer
- ✓ Encourage private and public sector participation through emission reduction projects
- ✓ Achieve co-benefits such as environmental quality, enhanced capacity, increased employment, and developed MRV expertise.

Thank you very much!

www.ncf.mn
www.jcm-mongolia.com