



MINISTRY OF ENVIRONMENT
AND TOURISM



The JCM status update and contributions to Mongolia's climate change targets

14th December, 2016

Workshop on the Joint Crediting Mechanism (JCM)

Promoting Low-Carbon Projects in Mongolia

Undarmaa Khurelbaatar

JCM secretariat, CCPIU

Ministry of Environment and Tourism



Outline

- * New Market Mechanism/ Joint Crediting Mechanism current update
- * Utilization of Carbon Mechanism and its reflection in Mongolia's NDC

National Policies and programs related to GHG mitigation

INTERNATIONAL

Mongolia ratified

1. UNFCCC in 1993
2. Kyoto Protocol in 1999
3. Energy Charter Treaty and Protocol on Energy Efficiency and Related Environmental Aspects in 1999
4. Paris Agreement in 2016

DOMESTIC

Laws:

1. Renewable Energy Law (2007)
2. Law on Air (2010)
3. Law on Air Pollution Payment (2010)
4. Law on Air Pollution Reduction of the Capital City (2011)

Long term sustainable development programs:

1. The Mongolian Action Program for the 21st Century (MAP 21)
2. The MDG-based Comprehensive National Development Strategy of Mongolia

Mid term programs:

1. National Action Program on Climate Change (2011)
2. National Renewable Energy Program (2005)
3. New Reconstruction Mid-term (development) Program (2010)

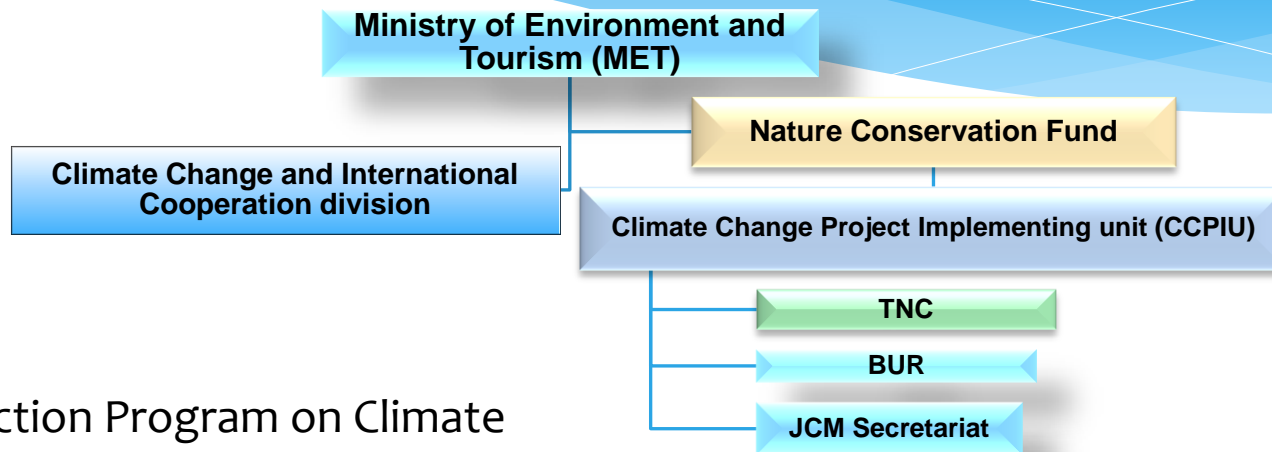
National Policies and programs related to GHG mitigation

Name	National Action Program on Climate Change (NAPCC)
Goal	<ul style="list-style-type: none"> ● To maintain ecological balances ● To develop social and economic resilient to climate change ● To reduce vulnerabilities and risks ● To mitigate GHG emissions through improvement of economic productivity and efficiency ● To support implementation of 'Green growth' policies
Year implemented	2011-2016 (1st phase), 2017-2021 (2nd phase)

Name	National Renewable Energy Program 2005-2020
Goal	<ul style="list-style-type: none"> ● To increase share of renewable energy in total energy generation to 20-25% by 2020 ● To reduce system loss by more than 10% (base line yr. 2005) by 2020

Name	New Reconstruction Mid Term Development Program 2010-2016
Goal	To decrease air pollution -30% by 2012, -50% by 2016
Baseline year	2010

Institutional arrangement



National Action Program on Climate Change (NAPCC)

1. Create legal framework, institutional and administrative structure that support implementation of measures against climate change
2. Ensure ecological balances and reduce socio economic vulnerabilities and risks step by step through strengthening of national adaptation capacity to climate change
3. **Mitigate GHG emissions step by step and create basis for transitioning to low carbon economy through introduction of environmentally friendly technologies and improvement of productivity and efficiency**
4. Enhance national climate observation network, research and assessment
5. Conduct public awareness and support citizens and communities to participate in actions against climate change

1st Phase (2011-2016)

- National mitigation and adaptation capacities will be strengthened.
- Legal framework, institutional and administrative structure will be set up.
- Community and public participation will be increased.

2nd Phase (2017-2021)

- Best available measures and activities for climate change adaptation will be implemented.
- Sustainable implementation of actions to decelerate growth of GHG emissions will begin.



2. New market
mechanism/Joint Crediting
Mechanism development in
Mongolia

New Market Mechanism development

With Cancun agreement its decided to consider the establishment of one or more market-based mechanisms (para 80)

- * Complementing other means of support for NAMAs by developing Parties
- * Safeguarding environmental integrity
- * Ensuring a net decrease and/or avoidance of global GHG emissions
- * Assisting developed Parties to meet part of their mitigation targets
- * Maintain and build upon existing mechanisms, including those established under the KP

Current Bilateral Cooperation on New Market Mechanism

In 2011 MNET and MoEJ signed MoU on

- Dec 2011-2013 for 3 years

Framework of the MoU in 2011 includes:

1. Mitigation and Adaptation on Climate Change;

A) Feasibility studies for Bilateral Offset Credit Mechanism;

B) Capacity building on new mechanisms such as NAMA, MRV etc.;

In 2013 MEGDT and MoEJ signed MoU on

- 2013-2016
 - 2016- expected to continue its cooperation
- Framework of the MoU in 2013 includes:

1. Mitigation and Adaptation on Climate Change;

a) Supporting initiatives related to the National Adaptation Plan of Mongolia (NAPM),

highlighting cooperation for climate change impact assessment;

b) Reducing vulnerabilities and risks via Early Detection System;

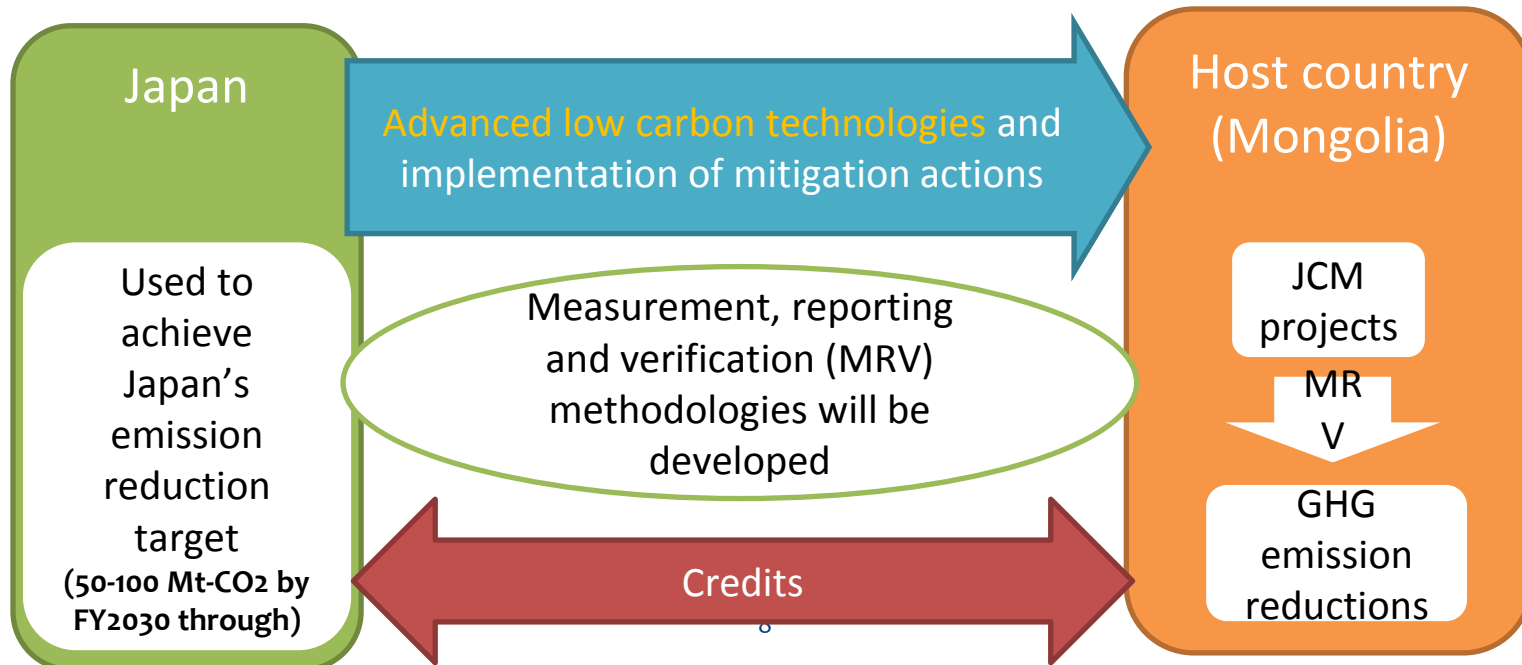
c) Supporting project implementation and studies for the Joint Crediting Mechanism

(JCM) and sharing the experiences related to the “Project of Establishment of Sustainable National GHG Inventory System through Capacity Building for GHG Inventory” project;

d) Supporting capacity building for the JCM and its Secretariat as well as for climate change response measures;

The Joint Crediting Mechanism (JCM)

- Implemented jointly by two countries, Japanese and Mongolia government started the JCM cooperation in January 2013
- Promote advanced low carbon technologies and products through JCM projects
- Require measurement, reporting and verification (MRV) and methodologies for GHG emission reduction activities
- Produce non-tradable credits that can be used as a part of Japan and Mongolian internationally pledged greenhouse gases mitigation efforts.



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)
- JCM **fourth** Joint Committee meeting (Ulaanbaatar - 30 Sep 2016)

Joint Committee

Mongolia

Co-Chair

Members (7
Ministries and UB
City Authority)

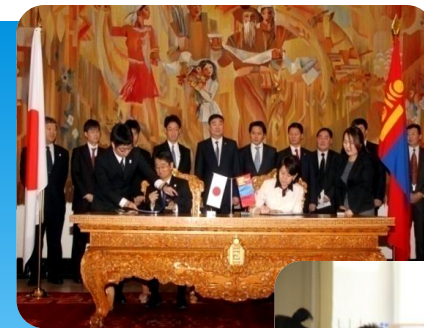
Secretariat

Japan

Co-Chair

Members
(2 Ministries and
Japanese Embassy
in Mongolia)

Secretariat



JCM stakeholders

Joint Committee

Credit issuance

Project regist.

TPE designation

Guidelines

Methodologies

**Project
participant
s**

PDD

Validation
Report

Monitoring
Report

Verification
Report

**Third Party
Entities**



Joint Committee



Mongolia

Co-Chair (MEGD)

Members
(7 Ministries and UB City
Authority)

Secretariat
(MEGD)

Observers
(Clean Air Fund and National Renewable
Energy Center and other related
organizations and experts)

Japan

Co-Chair
(MoFA)

Members
(2 Ministries and Japanese
Embassy in Mongolia)

Secretariat
(Mitsubishi UFJ
Research and
Consulting)

Observers
(IGES, OECC, GEC, NEDO and JICA)

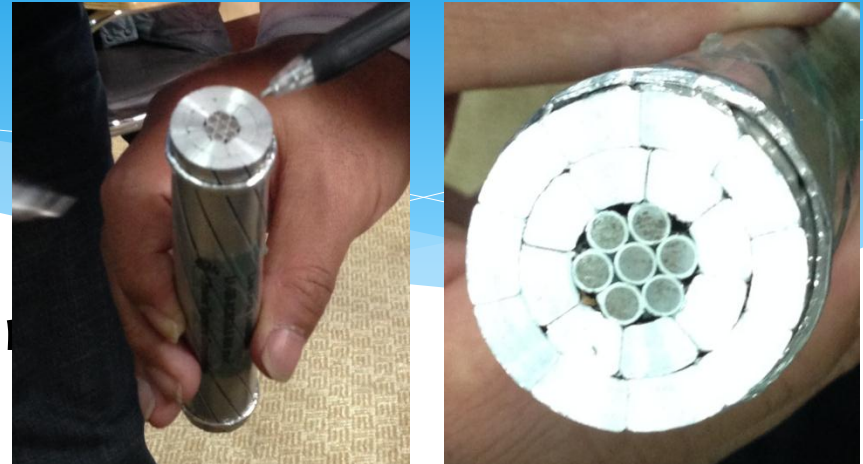


Approved documents for the JCM by JC

		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 Joint Committee (JC rules)
Methodology		<ul style="list-style-type: none"> •Guidelines for Developing Proposed Methodology (methodology guidelines)
Project procedure	Developing a 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	

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



MN_AM003 (30 Sep, 2016)
Installation of Solar PV System

Registered projects

MN001 (30 Jun, 2015)
Installation of high-efficiency
Heat Only Boilers in 118th
School of Ulaanbaatar City
Project

MN002 (30 Jun, 2015)
Centralization of heat supply
system by installation of high-
efficiency Heat Only Boilers in
Bornuur soum Project



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 CO ₂ emission by utilizing fly ash as cement substitute in Mongol	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
FS and Demo project	Co-benefit project for Heat Only Boiler	Energy (EE)	MoEJ/International Cooperation Office/OECC

JCM PROJECTS in MONGOLIA (2015-2016)

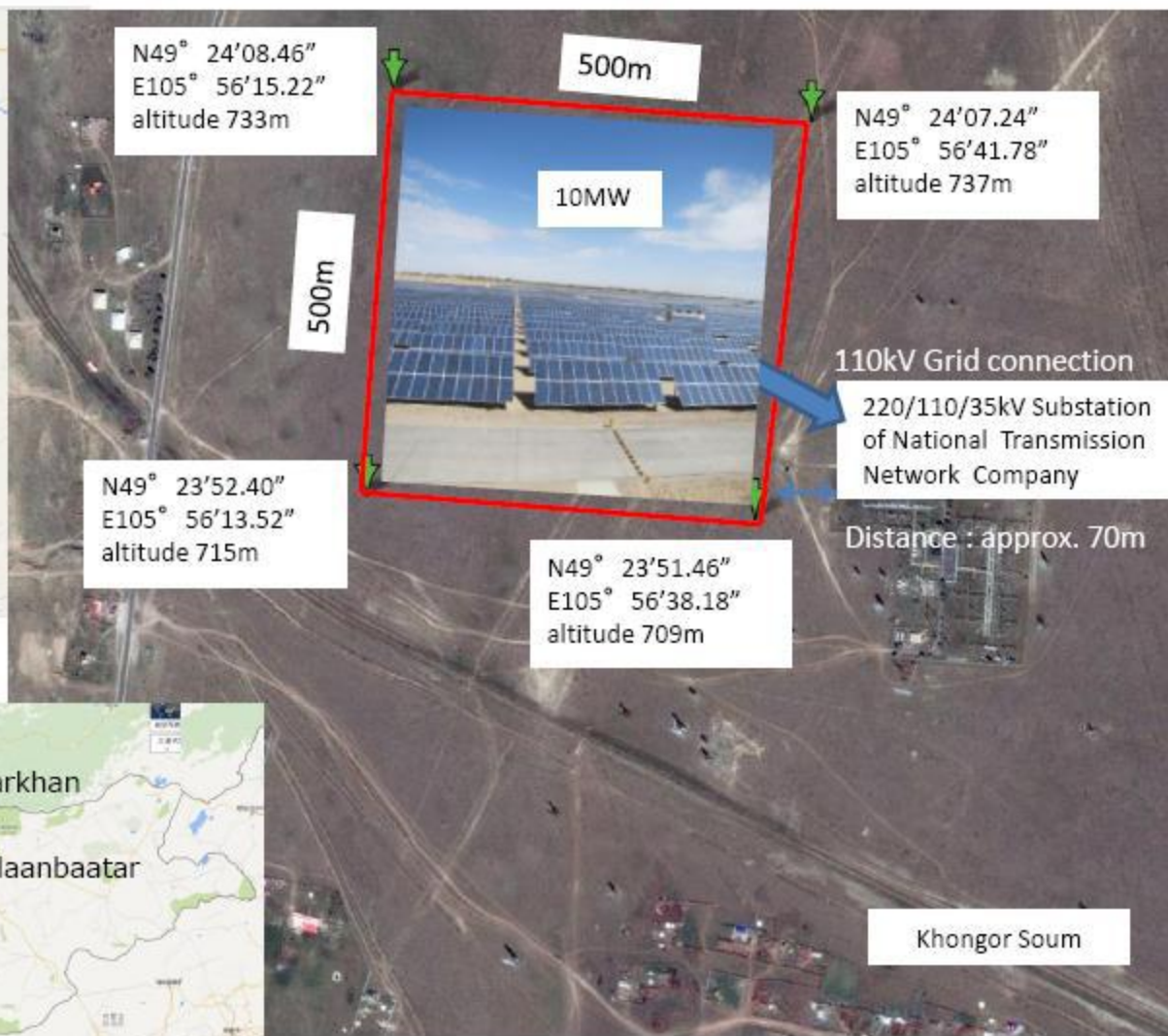
Project type	Project title	Sector scope	Support
Model project	10MW Solar Power Project in Darkhan City	Energy (EE)	MoEJ/GEC
Model project	Installation of 2.1MW Solar Power Plant for Power Supply in Ulaanbaatar Suburb	Energy (RE)	MoEJ/GEC
Feasibility Study (FS)	Distributed heat supply system using biomass and coal mixture combustion type boiler	Waste Management /Biomass Utilisation	MoEJ/GEC



JCM PROJECTS in MONGOLIA (2016-2017)

Project type	Project title	Sector scope	Support
Model project	Installation of 8.3 MW Solar Power Plant for Power Supply in Ulaanbaatar Suburb	Energy (RE)	MoEJ/GEC

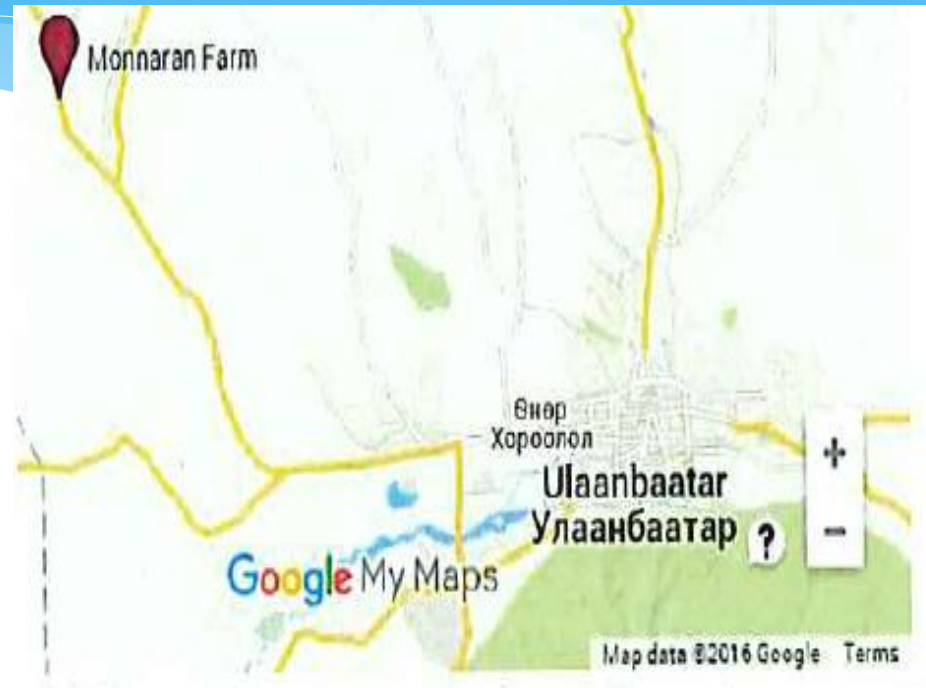




Model projects

Everyday Farm Do 2.1mWt Solar project

- * To Build a 2MW scale solar power plants in Monnaran district located on the outskirts of Ulaanbaatar city, aims to reduce the greenhouse gas and stabilize the power supply.
- * Farm Do (Japanese side) and Bridge company (Mongolian side)



First projects credited under the JCM

- * **MN001** (30 Sep, 2016)

Installation of high-efficiency Heat Only Boilers in 118th School of Ulaanbaatar City Project (**50ton/CO₂ eq CER**)

- * **MN002** (30 Sep, 2016)

Centralization of heat supply system by installation of high-efficiency Heat Only Boilers in Bornuur soum Project (**107ton/CO₂ eq CER**)

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	

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 ISO: 14064-1: 2006 approved
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 ISO: 14064-2: 2006 approved
• ISO 14064-3:2006	Specification with guidance for the validation and verification of GHG assertions	MNS ISO: 14064-3: 2006 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	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

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
Aryanie Amellina	Training on “Validation/verification for JCM”	10-11 November 2016

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.,

Capacity Building : Bilateral cooperation with Ministry of Environment, Japan



Cooperation programme on Developing the JCM seeds in Mongolia (2013)

Capacity Building Cooperation for implementing NAMAs in MRV manner (2012-2014)

To implement NAMA and JCM successfully in Mongolia, capacity building and detailed feasibility studies are IMPORTANT



Capacity building programme for market mechanisms including (JCM) and (CDM) (2012-2014)



To support new mechanism feasibility studies and MRV demonstration studies, implement demonstration projects (since 2011)

Co-benefit projects capacity building

- * OLYMPIA INDUSTRIAL CO.,LTD.:
 - * Technical Support and Transfer (Low carbon technology & air pollutant control measures technology)
- * SUURI-KEIKAKU CO.,LTD.:
 - * Estimation of GHG emission reductions based on JCM methodology which made by SUURI-KEIKAKU
 - * Estimation of Air pollutant emission reductions based on JICA Capacity Development Project in Ulaanbaatar City (technical transfer of measurement survey method of air pollutant)
- * JAPAN QUALITY ASSURANCE ORGANIZATION:
 - * Identification and solution of issues regarding MRV activity of JCM project, and Technical Support regarding the assessment of NREC (TPE of JCM)

Outline of FS on Co-Benefits Project

- * Feasible Study on Co-Benefits Project for Updating HOB (Improved MUHT (MUHT1, MUHT2); MUHT + Japanese Technology) in 65th School in Ulaanbaatar.
- * Reference HOB is set as vertical HOB.
 - * Same as Approval Methodology of “JCM” (NM_AM002)
- * Evaluation of Co-Benefits of Reference HOB and Improved MUHT(MUHT1 and MUHT2)
- * Case Study of Application of NM_AM002



←65thSchool (MUHT2)

79thschool
(Reference HOB)→

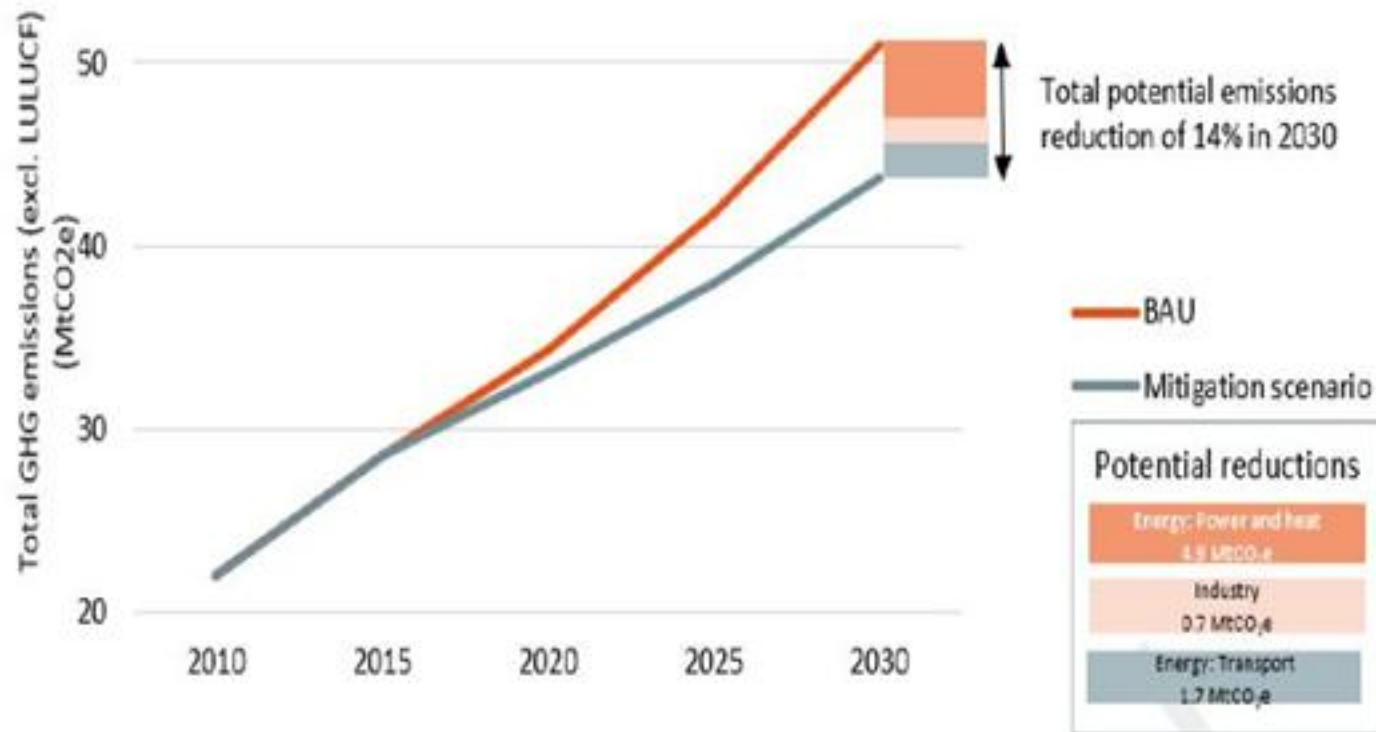


Source: suuri keikaku LLC



3. Utilization of joint crediting
mechanism in Mongolia's
NDC

Mongolia's Intended National Determined Contribution (INDC)



- Mongolia submitted its INDC to UNFCCC in September, 2015
- Main goal is reduce GHG emission by 14% in 2030 comparing to 2010

Intended Nationally Determined Contribution (INDC)

Timeframe	2030
Type of contribution	Policies and measures
Sectors	All sectors which covered by GHG Inventory 1. Energy, 2. Industry, 3. Agriculture, 4. Land Use Change and Forestry, 5. Waste
Gases	CO ₂ , CH ₄ , N ₂ O

Mongolia's NDC

Development of Mongolia's INDC

Mongolia's INDC has its conceptual roots in the Green Development Policy of Mongolia, approved by the Parliament in 2014, to which key sectorial action plans at the national level, including energy sector, are being adjusted. Key indicators for measuring progress in the implementation of the Green Development Policy include, among others, efficient use of energy, GHG emissions and ecological footprint per unit of GDP. The National Action Programme on Climate Change (NAPCC) endorsed by the Parliament 2011 includes concrete measures in response to climate change covering all principal sectors of economy. These and other relevant national level policy documents served as a basis for the development of Mongolia's INDC, which was shaped and finalized through comprehensive consultation exercises with a broad range of stakeholders.

Mitigation contribution

In its INDC, Mongolia has outlined a series of policies and measures that the country commits to implement up to 2030, in the energy, industry, agriculture and waste sectors. The expected mitigation impact of these policies and measures will be a 14% reduction in total national GHG emissions excluding Land use, land use change and forestry (LULUCF) by 2030 compared to the projected emissions under a business as usual scenario. Those and other potentially more ambitious commitments are contingent upon gaining access to new technologies and sources of finance through internationally agreed mechanisms and instruments under the auspices of the UNFCCC (see Annex A).

Adaptation component

The melting of permafrost and glaciers, surface water shortages, and soil and pasture degradation have been identified as particular challenges faced by Mongolia as a result of climate change. Due to a high degree of

Planning process and means of implementation

- * Many of the development and climate policies cover
- * periods up to 2016 and 2020
- * The measures outlined in this INDC have been introduced
- * as legislation and/or proposed in national development
- * strategies or plans
- * 3,5 billion USD
- * Green Climate Fund and to **crediting mechanisms** ...

Conclusion

- * There are several barriers regarding the implementation of JCM in Mongolia (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))
- * However there are **opportunities for GHG mitigation** in Mongolia
- * **Joint Crediting Mechanism is an efficient/ preferred** way to mitigate GHG emission in Mongolia
- * **International and Bilateral cooperation is necessary** to promote existing as well as emerging alternative /new mechanisms in Mongolia to fulfill its NDC's mitigation contribution.

Thank you for your
attention!

