



Mitigation action in Mongolia: the Joint Crediting Mechanism (JCM) and NAMAs implementation

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Mongolia: Overview



Climate: severe continental climate with distinctive 4 seasons

Location: Northern Asia between Russia and China

Total area: 1,564,116 sq.km (99% land, less than 1% water surface)

Population: 2.8 million

Urban population: 67.9%

Rural population: 32.1%

Population density: 1.76 person per sq.km

Capital city: Ulaanbaatar (home to nearly 1.2 million people, accounting for over 43% of the country's population). = 220 people per square meter

Natural zone: High Mountain, Taiga forest, Mountain forest steppe, Steppe, Desert Steppe, Gobi desert



Mongolia: Economy

✓A land-locked country located between Russia and China, Mongolia was the fastest growing economy in the world in 2011, with GDP growth rate of 17.5%. Mongolia's economy has grown rapidly over the last decade, growing at over 7% for 8 of the last 10 years and at over 10% for 4 of the last 10 years, reaching a GDP size of USD 10.3 billion in 2012.

✓ Agriculture and Mining sector accounts for over 30% of Mongolia's GDP in 2012, over 95% of export revenues and employs nearly 40% of the workforce. Much of Mongolia's recent economic growth has been fuelled by investment in the country's mining sector, which accounted for over 30% of the country's GDP in 2012. [Mongolia statistical yearbook 2012]





Current status of Mongolia under the UNFCCC

The Mongolian government's response to address the issue of climate change has been positive

- Ratification of the UNFCCC (1993)
- Ratification of the Kyoto Protocol (1999)

Undertaken steps to implement UNFCCC's goal

- Initial national communication (1st November 2001)
- Submission on NAMAs (28th January 2010)
- Second national communication (10th December 2010)
- National Action Program on Climate Change (6th January 2011)
- Technology Needs Assessment (2013)

Upcoming steps to implement UNFCCC's goal

- Preparation of first Biennial Update Report (BUR)
- Preparation of Third national communication

Inevitably, the works undertaken and the expected outputs of NAMAs in MRV manner will be outlined in BUR and
Will be submitted to UNFCCC as a stand-alone update report





Government Policy goals and targets for Low Carbon Development

Name	NATIONAL ACTION PROGRAM ON CLIMATE CHANGE (approved by Parliament in 2011)
Specific Targets	Specific fuel consumption of electricity generated in the central energy system will be reduced by 10-20 gJ/ kW h, Specific fuel consumption of thermal energy production will be reduced by 20 kgJ/gCal compared to 2010, Share of Renewable energy sources in the energy balance will reach 10 %, Heat use will be reduced by 25 % [by the end of first phase].
Duration	2011-2021 (to be implemented in 2 phases)
Name	NATIONAL RENEWABLE ENERGY PROGRAM (approved by Parliament in 2005)
Specific Targets	To increase share of renewable energy in total energy generation to 20-25% by 2020, and to reduce system loss by more than 10% (baseline yr. 2005) by 2020
Duration	2005-2020
Name	NEW RECONSTRUCTION MIDTERM DEVELOPMENT PROGRAM (approved by Parliament in 2010)
Specific Targets	To decrease air pollution -30% by 2012, -50% by 2016 compared to 2010
Duration	2010-2016
Name	CONCEPT NOTE AND MIDTERM PROGRAM FOR GREEN DEVELOPMENT (DRAFT)
Specific Targets	To increase share of RE in the total installed capacity to 20% by 2020, and 30% by 2030 and to reduce CO2 emissions per GDP twice compared to 2006 by 2020, and 2.5 times by 2030.
Duration	2013-2032 (to be implemented in 2 phases)



National Action Program on Climate Change

The "National Action Program on Climate Change" (NAPCC) was approved by the second resolution of State Great Khural (Parliament) on 6th January, 2011. The following five strategic objectives will be implemented in **two phases** over the period **2011-2016** and **2017-2021**.





Historic and future GHG emission trend



Importance of GHG mitigation in Mongolia



Source: Economics of Climate change in East Asia, ADB, 2013

Even though absolute size of GHG emissions in Mongolia is tiny, **Carbon intensity** of energy sector **is highest among regional countries** due to extensive use of coal for electricity and heat production.



COP19 Side Event by GEC/OECC, 12/11/2013 Mongolia's NAMA submission

Mongolia has associated with the Copenhagen Accord and submitted the list of NAMAs to the Climate Change Secretariat according to the Appendix II of Copenhagen Accord.

No	Sector and Actions (Publication date: 28th January 2010)
1	Energy supply - Increase renewable options
2	Energy supply - Improve coal quality
3	Energy supply - Improve efficiency of heating boilers
4	Energy supply - Improving household stoves and furnaces
5	Energy supply - Improve CHP plants
6	Energy supply – Increase use of electricity for local heating in cities
7	Building – Building energy efficiency improvement
8	Industry – Energy efficiency improvement in industry
9	Transport –Use more efficient cars
10	Agriculture- Limit the increase of the total number of livestock by increasing the productivity of each type of animal, especially cattle
11	Forestry –Improve forest management



COP19 Side Event by GEC/OECC, 12/11/2013 Cooperation for Implementing NAMAs in a MRV-able manner with OECC

Action 1. Identify BAU and NAMA scenario in the Energy Supply Sector

(A. on the biggest CHPs in capital city in 2012-2013)

Action 2. Preparation of an Implementation Plan for NAMA

- Action 3. Preparation of MRV
- Action 4. Preparation of Institutional Arrangement for NAMA implem
- Action 5. Collection of information on suitable technology





In 2013-2014, additional areas to be covered for NAMAs in energy supply sector such as renewable energy, energy efficiency improvement in HOBs, heating in Ger district.



Air Pollution in Ulaanbaatar in Comparison with Other Cities





Why energy sector and especially CHPs?

The energy sector is the most significant source of CO_2 emissions in Mongolia due to inefficient ageing coal-fired CHP plants and its fuel type (coal)





Initial result of NAMA study: GHG emissions in the BAU scenario and after NAMA implementation (ton-CO2eq)





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To implement NAMAs submitted to the UNFCCC, Mongolia is seeking various supports including **finance, technology transfer and capacity building** from bilateral and multilateral sources including ODA and soft loan etc.,

Joint Crediting Mechanism as a driver for NAMAs implementation through financing and technology transfer

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

(Ulaanbaatar- 8 January 2013)



Technical Meeting between Mongolian and Japanese Government Officials (Ulaanbaatar - 28 Feb - 01 March, 2013)

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









Verification bodies of Mongolia

COP19 Side Event by GEC/OECC, 12/11/2013 Capacity Building: Bilateral cooperation with Ministry of Environment, Japan



Application of geothermal heat-pumps...



COP19 Side Event by GEC/OECC, 12/11/2013 Other potential areas for mitigation



i.e. Recover and utilize CMM, CBM (coal mine/coalbed methane) from mine and waste gas from semi coke plants for energy production

i.e. Power supply by Diesel Hybridization and Replacement by Renewable energy

Agriculture and forest

i.e. Biogas Potential in Dairy and Chicken Farms

i.e. Clean Fuel (Biomass Briquettes) for Cooking and Heating

Implementing NAMAs

can address

i.e. Energy Efficiency Improvements in Cashmere, Cement and Metal Industry

Industry

i.e. Renewable Energy in Telecom Industry

Others

i.e. Fuel Efficiency and Hybrid Vehicles in Transport Sector

i.e. Municipal Solid Waste (MSW) to Energy Plants

i.e. Energy Efficiency and Renewable Energy in Buildings

> Mitigation of Climate Change (GHG emission reduction)



Not only



CONCLUSION

- Mongolia has been developing and vigorously promoting various policies and measures to mitigate greenhouse gases emissions by sources and to enhance greenhouse gas sinks by removals.
- Technology transfer is essential part of NAMAs and it is very important to identify clean technologies that are best suited for each countries for climate change mitigation and adaptation
- Financing is key to implement NAMAs, and credible MRV mechanism is crucial to get international support and for this international support is vital to build national capacity on research and development of MRV system for NAMAs
- Various approaches such as Bilateral Offset Credit Mechanism (BOCM/JCM) could be used to implement NAMAs

Thank you for your kind attention!

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