MONGOLIA'S NATIONALLY DETERMINED CONTRIBUTION
TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

Overview of Mongolia's Nationally Determined Contribution

Mongolia has developed its Nationally Determined Contribution (NDC), which was approved by the Government Decree No.407 of November 2019, with the aim to contribute to the Paris Agreement. In the NDC, Mongolia has enhanced its mitigation efforts with policies and measures to be implemented in key economic and natural resource management sectors by 2030.

The mitigation target of Mongolia's NDC will be a 22.7% reduction in total national greenhouse gas (GHG) emissions by 2030 (Figure 1), compared to the projected emissions under a business as usual scenario for 2010. In addition, if conditional mitigation measures such as the carbon capture and storage and waste-to-energy technology are implemented, then Mongolia could achieve a 27.2% reduction in total national GHG emissions. Along with that, actions and measures to remove GHG emissions by forest are determined, which set the total mitigation target of Mongolia as 44.9% of GHG emission reduction by 2030.

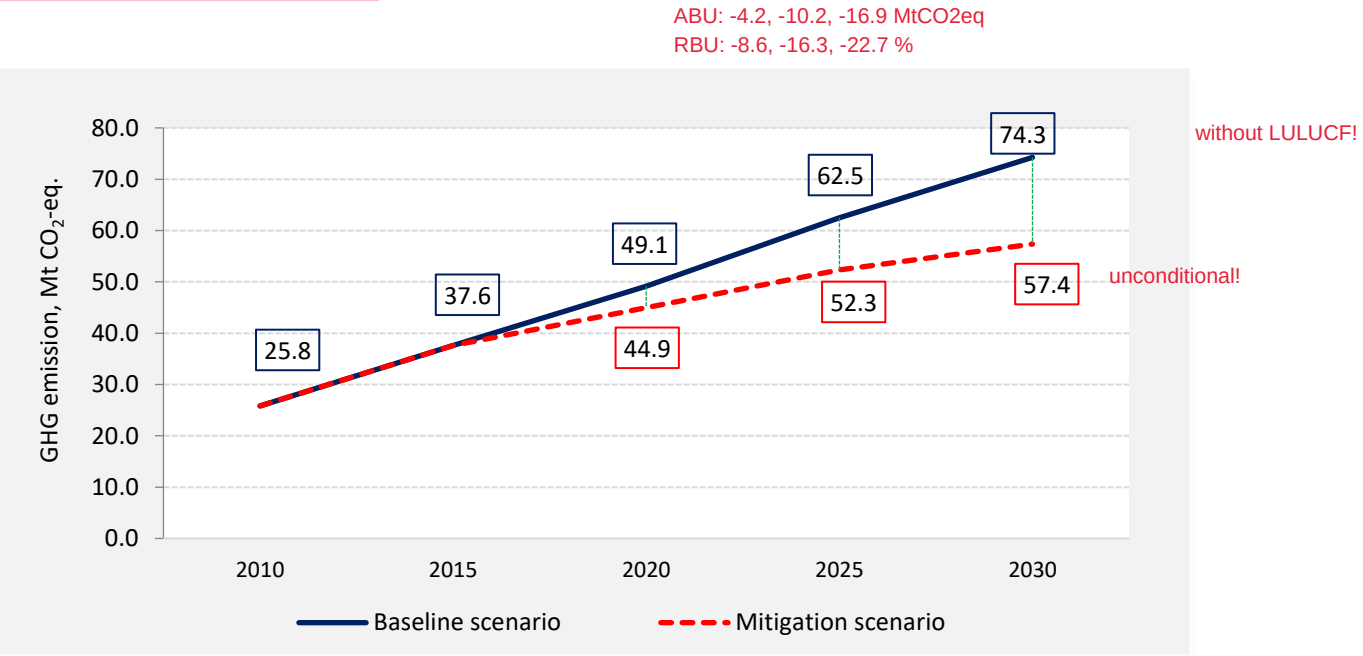

Figure 1. Comparison of BAU baseline GHG emission and mitigation scenarios (Mt CO_2-eq.)

In the development of this NDC, Mongolia re-calculated the baseline emissions up to 2030, which are estimated to reach 74.3 Mt CO_2-eq. in 2030 without LULUCF, compared to 2015's INDC baseline of 51.3 Mt CO_2-eq. The difference between these baseline emissions is primarily due to a variance in the methodology applied for base year emission (Revised 1996 IPCC GLs for INDC and 2006 IPCC GLs for NDC), as well as increasing the number of livestock and additional policy plans in the industrial processing sector, e.g. coal gasification project. This NDC now includes sectors that were not previously considered such as agriculture, waste and some industrial sectors. Under the new baseline, the mitigation target is a 22.7% reduction in total national GHG emissions. Under the 2015 baseline and INDC, the mitigation target was a 14% reduction in total national GHG emissions excluding land use, land use change and forestry (LULUCF) by 2030.

Adaptation needs and priorities are determined broadly in the NDC, considering the country specific vulnerabilities and climate risks for key socio-economic and natural resource management sectors. Moreover, there is an ongoing project (2018-2021) aimed to develop the national adaptation plan (NAP), and through this effort, the specific adaptation action will be identified. For the development of NAP, Mongolia is taking special consideration of the co-benefits between mitigation and adaptation actions, as well as on nature-based solutions in order to increase the efficiency and effectiveness of response measures to climate change.

By 2030, Mongolia intends to contribute to global efforts to mitigate GHG emissions by implementing the policies and measures listed in Annex 1, facilitating continued international support to complement domestic efforts. The initial estimate of financial needs for this NDC implementation is around US$11.5 billion, of which US$6.3 billion for mitigation, and US$5.2 billion for adaptation.

ANNEX 1: Mongolia's NDC target by 2030

A. Nationally Determined Contribution Target
Mongolia intends to achieve a target to mitigate its greenhouse gas emissions by 22.7 percent by 2030, compared to the business as usual scenario, excluding LULUCF.

B. Methodology and Assumptions	
Metric applied	IPCC Second Assessment Report (SAP), 100-year time horizon Global Warming Potential (GWP)
Methodologies for estimating GHG emissions	LEAP (energy sector) 2006 IPCC Guidelines for national GHG inventories (non-energy sector)
Approach to accounting for agriculture, forestry and other land uses	2006 IPCC Guidelines for national GHG inventories Multiple Forest Reference Level, 2018
Implementation and integration of NDC into the national development policy and strategies	For the achievement of NDC targets, it is imperative to develop a national roadmap, which reflects all actions and measures along with guidelines for sectors and integrate these actions into the Government action program and the national budget. The integration of NDC targets into the development of policy documents is beneficial to mobilize climate finance and explore international cooperation and support. One of the advantages of the NDC is that the principle targets presented in the NDC are in line with the national development policy documents such as the Vision-2050, which covers the development framework reflected in the following documents: - Green development policy of Mongolia, 2014 - National action program on climate change, 2011 - Sustainable development vision-2030, 2016 - State policy on the energy sector of Mongolia, 2015 - State policy on food and agricultural sector, 2010 - State policy on forest, 2015 - Law on renewable energy, 2015 - Law on energy, 2015 - National program on energy saving, 2017 These national strategy and policy documents, as well as relevant legal instruments define stakeholders' responsibilities and monitoring structure for implementation of the NDC.

C. Mitigation Targets		
Base year		2010
Base year emission (Mt CO_2-eq.) exclLU		2010 25.8
Target year		2030
Emission target by 2030 (Mt CO_2-eq.) exclLU		57.4
BAU emission in 2030 (Mt CO_2-eq.) exclLU		74.3
Emission reduction target	GHG emission reduction target (Mt CO_2-eq.) exclLU	16.9
	GHG EMISSION REDUCTION TARGET (%) exclLU	**22.7%**
Type		Policies and measures
Coverage		Nationwide
Gases covered		Carbon dioxide (CO_2) Methane (CH_4) Nitrous oxide (N_2O) Hydrofluorocarbons (HFCs)
Sectors		Energy sector: - Energy production - Energy consumption Non-energy sector: - Agriculture - Industry - Waste
Conditional mitigation measures		
GHG emission reduction from conditional measures, (Mt CO_2-eq.)		3.3 3.3 + 16.9 = 20.2
Total GHG emission reduction (including conditional measures), (%)		**27.2%** this is the total value for uncondi+condi excllLU
GHG removals measures		
GHG removals by forest, (Mt CO_2-eq.)		-2.6 for which year?
Total GHG emission reduction (including conditional measures and forest sink), (Mt CO_2-eq.)		22.8 probably that is 3.3 from excllLU and 19.5 from onlyLU?
TOTAL GHG EMISSION REDUCTION, (%) (including conditional measures and forest sinks)		**44.9%** that is uncondi + condi incllLU

C.1. Mitigation Actions and Measures	
Actions planned	*GHG emissions reduction, Gg CO_2-eq.*
One. ENERGY SECTOR	
1.1 Energy sector (production)	
Use of renewable energy sources • Hydro Power Plants • Wind Power Plants • Solar Power Plants • Heat pumps for heating utilities Improved efficiency of energy production • Reduce electricity and heat transmission and distribution grid losses • Reduce the internal use of combined heat and power plants (CHPP) • Improve the efficiency of power plants • Improve the heat supply in cities and towns (improving the efficiency of heat only boilers)	8,340.5
1.2 Energy sector (consumption)	
Transportation: • Switch to Euro-5 standard fuel • Switch the coal export transportation to rail transport from auto transportation • Switch the heating of passenger train to electric heating	1,048.8
Construction: • Insulate old precast panel buildings in Ulaanbaatar city • Limit the use of raw coal in Ulaanbaatar city and switch to the use of improved fuel	830.1
Industry: Energy saving measures	1,045.2
Total GHG emission reduction from the energy sector	**11,264.6**
Two. NON-ENERGY SECTOR	
Agriculture: • Regulate and reduce the livestock number • Improve the livestock manure management	5,283.3
Industrial Processes and Product Use (IPPU): • Use waste heat from cement plants • Use fly ash in cement production • Use coal bed methane	234.1

Waste: • Reduce the waste volume for landfill through the improved waste treatment and recycling process • Increase the share of the population with access to improved sanitation and hygiene facilities	106.1
Total GHG emission reduction from the non-energy sector	**5,623.5**
Total GHG emission reduction	**16,888.1** unconditional total

D. Adaptation Targets	
Goals	***Targets***
Animal husbandry and pastureland	
Increase the productivity of the animal husbandry sector while ensuring the sustainable development of the sector and reducing the impacts and risks associated with climate change.	• Maintain the ecosystem balance by strengthening the legal environment and pastureland management; • Sustainable use of pastureland by increasing the forage cultivation and water supply for livestock; • Enhance the disaster prevention system against drought and dzud.
Arable farming	
Enable the sustainable supply of healthy food for the population, fodder for livestock, raw materials for the light and food industries through the agricultural products, by properly utilizing the positive impacts and reducing the adverse impacts of climate change in the agriculture sector.	• Save water for irrigation by using plastic-films/mulches on potato and vegetable fields; • Reduce water use and irrigation costs by applying drip and infusion systems in irrigated potato, vegetable, fruit, and berry productions; • Protect the soil from wind, water erosion and damages, and sustain a high yield by applying straw mulches for non-irrigated crop and forage fields; • Reduce soil moisture loss and damage of mechanical structure soil and reduce direct tillage costs by eliminating mechanical tillage and implementing zero-tillage technologies.
Water resources	
Increase efficient water use methods, enhance the adaptive capacity of the water sector.	• Strengthen the legal and institutional frameworks for integrating sectoral coordination to ensure water security; • Enhance the resilience of the water sector through the utilization of appropriate technologies for conservation, restoration, sustainable use and increase water resources.

Forest resources	
Create forest ecosystems well adapted to climate change and enhance carbon sink by implementing sustainable forest management.	• Implementing forestry measures such as thinning and deadwood removal to improve forest structure and conditions and to create a highly productive and climate change-resilient forest; • Increasing non-carbon and socio-economic benefits of forests by implementing sustainable forest management.
Biodiversity	
Enable adaptation opportunities and adaptive capacities for vulnerable biodiversity to climate change.	• Maintain the long-term adaptive opportunities for vulnerable biodiversity to climate change by increasing special protected areas through the better management of protected areas' border and connectivity; • Determine vulnerable dry-land ecosystems and soil organisms to climate change, and identify and evaluate vulnerable functional groups, indicator species, and develop and implement a relevant plan for action; • Implement protection and sustainable management measures for enhancing the recovery capacity of vulnerable and unique ecosystems; implement a pilot research project on climate change in different landscapes covering high mountain, forest, meadow, fresh water, wetland, peatland, steppe, Gobi Desert, etc.
Natural disaster	
Build resilience to natural disasters by reducing the risks and adapting to impacts of climate and weather-related hazards and disasters.	• Conduct and regularly update risk assessments for natural disasters, and reduce the disaster risks based on the partnership of various stakeholders; • Reduce disaster-related losses and damages by strengthening the capacity of early warning systems for climate, weather-related hazards and disasters, and by enhancing the system for effective and timely dissemination of climate and disaster-related information; • Integrate disaster risk reduction measures into development policy planning, introduce techniques and technologies in disaster risk reduction, and increase investment and financing.

Public health	
Strengthen healthcare services and capacities for early warning of potential health risks, and provision of proactive and response measures through the comprehensive study of climate change impacts on public health.	• Assess the risks and impacts of climate change on public health, and conduct research specifically focusing on the risk of spreading tropical diseases and infections from other regions with endemic diseases due to a possible shift of climate zones, while considering the common immune system of Mongolian people; develop plans to reduce potential risks; • Build knowledge and awareness regarding climate change impacts and adverse effects on human health, and empower the general public for adopting protective behaviours; • Strengthen the readiness and capacities of health institutions and organizations to respond to public health risks induced by climate change.
Livelihood and social safeguard	
Establish a system providing social safeguard, insurance and prevention measures to reduce the vulnerability of social groups and build their resilience to climate change impacts by identifying groups vulnerable to climate change.	• Identify social groups vulnerable to climate change and build their resilience to overcome the risks; • Reduce vulnerability by diversifying economic activities, increasing income, expanding income sources and supporting sustainable livelihoods; • Ensure equality for the vulnerable groups and increase employment by providing knowledge and education.

E. Needs for Support	
Financial Support	The financial needs for the NDC implementation are estimated initially as US$11.5 billion, of which US$6.3 billion for mitigation, and US$5.2 billion for adaptation.
Technology Transfer	In order to solve problems, the focus has to be made on soft approaches rather than solely relying on hard ones, including indigenous knowledge of local communities, combining traditional practices with modern know-hows. For determining the most suitable, efficient, and effective technologies, Mongolia needs to conduct the technology needs assessment.
Capacity Building and Knowledge Sharing	Building capacities to disseminate and transfer scientific information and knowledge and educating the public and various stakeholders on climate change, its impacts, as well as potential mitigation and adaptation measures are an essential precondition for the successful implementation of Mongolia's NDC.