



## STRAIGHT TO THE POINT

- » Mongolia aims to reduce greenhouse gas (GHG) emissions by 14 percent compared to a business-as-usual scenario (BAU) by 2030. Nearly all reductions in emissions will come from the energy sector. The new Law on Energy and Renewable Energy has been adopted and aims to increase the share of renewable energy in total primary energy sources to 30 percent by 2030.
- » The country's adaptation plan works to reduce climate risk and vulnerabilities. Specific examples of adaptation objectives come in the form of improved ecosystem, livestock, land, forest and water management; climate smart agriculture; and disaster risk management through increased access to climate data and information.
- » The Ministry of Environment and Tourism (MET) leads national efforts to report to the United Nations Framework Convention on Climate Change (UNFCCC), and develops and implements climate change related policies and projects. The Environment and Climate Fund (ECF) under the MET also provides support in coordinating and implementing climate policies.
- » Mongolia has created five Nationally Appropriate Mitigation Actions (NAMAs). These mitigation actions cover projects that aim to increase the use of energy efficient lighting and appliances; reduce building heat loss—aiming at a 40 percent reduction by 2030 compared to 2014 levels; capitalize on low carbon construction methods by using supplementary cementitious materials (SCM); deploy sustainable urban passenger transport systems; and combat desertification and reduce emissions in the agriculture sector.
- » Mongolia's recent Biennial Update Report highlighted that there is still work to be done on aligning and harmonizing coordination efforts amongst Mongolia's multiple ministries when it comes to effectively mainstreaming climate policy into national development plans. The NDC Partnership is centralized on the idea that coordination and national mainstreaming are two of the most important factors when it comes to institutionalizing sustainable development into government planning. Mongolia could work with the NDC Partnership to deliver a technical and collaborative dialogue on how best to improve coordination within the Government and with development partners.

## BACKGROUND

### HUMAN DEVELOPMENT IN THE ANTHROPOCENE

Mongolia is a landlocked country located between China and Russia, and has formed into a democratic parliamentary republic, as defined by the Constitution and the 1992 Law on Government Administration. There are three tiers of local government and the country is divided into 21 administrative areas. These areas are called 'Aimags' and are further divided into smaller areas, called Soums. Mongolia's population currently stands at around 3 million and is predominantly based in urban areas (28 percent live rurally). The population is still growing and is expected to increase to 3.5 million by 2030.<sup>1</sup>

<sup>1</sup> [http://hdr.undp.org/sites/default/files/hdr\\_2016\\_statistical\\_annex.pdf](http://hdr.undp.org/sites/default/files/hdr_2016_statistical_annex.pdf)



The country has a wide range of geographical features, the country hosts mountains, forest steppe, and the Gobi Desert. The climate can be described as highly continental with short warm summers and long, dry and very cold winters. The extremities of the winter period in Mongolia can put livelihoods at risk during events known as “Zuds” (Dzud). Zuds often result in widespread death of livestock due to an inability to graze, and subsequently greatly impact the welfare of many Mongolians. Successfully adapting to climate extremes is no new challenge in Mongolia.

Mongolia has taken great steps towards institutionalizing climate related laws across its regions. The Environmental Protection Law sets a key foundation for working towards climate resilient development through stating that all citizens— and organizations—both future and present—should guarantee the human right to live in a healthy and safe environment, as stipulated by the Constitution.

Much economic growth in Mongolia relies on its natural resource base. Mining and agriculture alone contribute nearly one-third to total Gross Domestic Product (GDP).<sup>2</sup> The mining sector is especially important for Mongolia when it comes to international trade; mining consistently accounts for over 80 percent of national export value, coal and copper being the main products exported. Animal husbandry is also of great importance for Mongolia, pasture accounts for around 80 percent of all agricultural land. Animal husbandry remains as the most common form of occupation for Mongolia’s population.<sup>2</sup>

Mongolia is no exception to common global economic trends in livelihood diversification and transitions towards tertiary sectors. The banking and finance sector has grown rapidly and services were responsible for over half of all national GDP in 2015.<sup>2</sup>

Energy used to run Mongolia’s economy has been for the most part generated from coal fired power plants. Around 96 percent of domestically produced electricity comes from coal based sources of energy, renewables cover just three percent.<sup>2</sup>

Although there have been proposals to expand the use of hydropower in Mongolia, there has been little progress when it comes to implementation. Over 70 dams have been planned, however just 2 have been built to date. Expanding the hydropower base has been a key challenge for both political and climatic reasons. There have been existing transboundary water debates that have stalled works on key sites, and dams have consistently frozen over in winter periods, leading to a reduction in electricity production.<sup>2</sup> There has been an increased focus on initiating solar and wind projects in Mongolia as a result. According to the World Bank’s newly released Global Solar Atlas, Mongolia has some of the greatest potential in Asia when it comes to solar based technologies.<sup>3</sup>

Recently Mongolia has faced macroeconomic challenges from commodity price slumps and a slowing demand in key export markets. A recent IMF package surmounting to USD 5.5 billion will work to put Mongolia back on track towards stable and inclusive economic development, and help attract—and *importantly sustain*—foreign investment.<sup>4</sup>

It is important to not only look at Mongolia’s progress through one GDP focused lens. Under broader and purpose-made measures of human development Mongolia has been improving consistently over many decades. As a country, Mongolia now sits under the High Human Development category within the UNDP’s HDI Index and currently has a value of 0.735.\* This has been a great achievement for the nation, especially if one considers today’s value relative to the 1990 value of 0.579, a 27 percent increase (this lowest level being

<sup>2</sup> [http://unfccc.int/files/national\\_reports/non-annex\\_i\\_parties/biennial\\_update\\_reports/application/pdf/mongolia\\_bur1\\_resubmission\\_and\\_annexnir.pdf](http://unfccc.int/files/national_reports/non-annex_i_parties/biennial_update_reports/application/pdf/mongolia_bur1_resubmission_and_annexnir.pdf)

<sup>3</sup> <http://globalsolaratlas.info/?c=44.370987,106.875,5&s=45.336702,107.226563>

<sup>4</sup> <http://www.imf.org/en/News/Articles/2017/05/31/NAO5317Mongolia-Turns-the-Corner-with-5-5-Billion-IMF-Led-Financing-Package>



partly attributed to the challenges of transitioning to a market economy). Although Mongolia does not suffer quite as much as some other nations when it comes to inequality, the impacts are still severe and once this is accounted for within the inequality adjusted HDI (IHDI), human development reduces by 13 percent.<sup>1</sup>

Another important measure of human development comes in the form of multidimensional poverty. Multidimensional poverty measures help to overcome the limitations of narrow income-only poverty measures through incorporating two key determining factors of income, education and health. In 2015, over one out of every ten individuals in Mongolia lived in multidimensional poverty.<sup>1</sup>

## EMISSION PROFILE

Net greenhouse gas emissions (GHGs) in 2014 stood at around 10 Megatons CO<sub>2</sub>e (including LULUCF). When this figure is referenced to 1990 as a base year—*back when Mongolia was a net sink; due to significantly reduced industrial activities from the collapse of the centrally planned economy*—it represents an emission increase of 1,034 percent.<sup>2</sup> When evaluated according to sectors, energy (50 percent) and agriculture (49 percent) are responsible for nearly all of the current emissions coming from Mongolia.<sup>2</sup> Mongolia's total emissions (including LULUCF) represent around 0.02 percent of global emissions, although Mongolia is around 40 percent above the global average when it comes to per capita carbon emissions.<sup>5</sup>

Even though 49 percent of GHGs come from the agriculture sector, around 90 percent of all emission reductions within Mongolia's NDC are focused on the energy sector. Nearly a third of all GHG emissions (CO<sub>2</sub>e) come from methane and nitrous oxide; carbon dioxide is responsible for the remaining two-thirds.<sup>6</sup>

## COUNTRY AMBITION

Mongolia aims to reduce GHG emissions by 14 percent compared to a business as usual scenario by 2030. Nearly all reductions in emissions will come from the energy sector. The new Law on Energy and Renewable Energy has been adopted and aims to increase the share of renewable energy in total primary energy sources to 20 percent by 2020, 25 percent by 2025, and 30 percent by 2030. Other key intervention areas come in the form of increased energy efficiency. Mongolia's NDC includes actions for reduced energy transmission losses, reduced building heat loss, and increased energy efficiency for Combined Heat and Power Plants (CHPs).

The National Action Programme on Climate Change (NAPCC) supports Mongolia's NDC and has specific provisions for transformative change within a variety of sectors.<sup>7</sup> The NAPCC is to be implemented in two phases: the first phase (2011-2016) aimed to strengthen national capacities, set up climate related laws, and improve public awareness and participation in climate change related activities. The second phase (2017-2021) will work to strengthen the implementation of mitigation and adaptation actions.

Mongolia's adaptation plan works to reduce climate risk and vulnerabilities. A vulnerability based approach to adaptation is a key focus for the nation and helps to recognize and address climate risk, and increase resilience in a manner that is dynamic and works to empower those that are adapting to climate change.

<sup>5</sup> <https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?view=chart>

<sup>6</sup> <http://cait.wri.org/profile/Mongolia>

<sup>7</sup> [http://www4.unfccc.int/ndcregistry/PublishedDocuments/Mongolia%20First/150924\\_INDC%20of%20Mongolia.pdf](http://www4.unfccc.int/ndcregistry/PublishedDocuments/Mongolia%20First/150924_INDC%20of%20Mongolia.pdf)

\*A value of 1 would mean fully developed



This not only helps to make adaptation a story about independence rather than dependence, it also allows Mongolia to adapt autonomously and proactively, rather than reactively.

Specific adaptation aims come in the form of improved ecosystem, livestock, land, and water management; climate smart agriculture; and disaster risk management through increased access to climate data and information.<sup>7</sup>

According to the NDC, USD 3.4 billion will be required to implement adaptation actions, and up to 80 percent of this will be dependent on financial and technology transfer. As for mitigation, the costs are believed to be around USD 3.5 billion and again much of this action is dependent on the continuation of international support through the likes of the Green Climate Fund.<sup>7</sup>

The medium-term strategy for Mongolia is formed within its Sustainable Development Vision 2030. The Vision has been approved by the State Great Khural of Mongolia and strengthens Mongolia's ambition in reaching the 2030 Sustainable Development Goals (SDGs).<sup>8</sup>

## STATE OF PLAY

### GLOBAL FINANCING FOR AMBITIOUS CLIMATE ACTION

Mongolia has made a great deal of progress since ratifying the Paris agreement in September 2016. The Ministry of Environment and Tourism (MET) leads national efforts to report to the United Nations Framework Convention on Climate Change (UNFCCC), and develops and implements climate change related policies and projects. The MET has recently submitted Mongolia's first Biennial Update Report (BUR) to provide an update on progress and to communicate constraints, gaps, and related financial, technical and capacity needs. Mongolia is also currently working on its third National Communication to the UNFCCC (these being submitted every four years).

Mongolia has progressed with project design through a series of Nationally Appropriate Mitigation Actions (NAMAs). Three out of the five NAMAs submitted to date focus in on mitigation potentials within the building sector. These mitigation actions cover projects that aim to increase the use of energy efficient lighting and appliances; reduce heat loss—aiming at a 20 percent reduction in heat loss by 2020 and 40 percent by 2030 compared to 2014 levels; and capitalize on low carbon construction methods by using supplementary cementitious materials (SCM) that can replace up to 70 percent of cement in concrete.<sup>9</sup>

Of the other two NAMAs, one aims to establish a sustainable urban passenger transport system in Ulaanbaatar through increasing public transport use, and the other works to combat desertification and reduce emissions in the agriculture sector.<sup>9</sup>

Further progress has been made in respect of accessing climate finance through the Green Climate Fund (GCF). A business loan programme for GHG emission reductions has been designed with one of Mongolia's commercial banks, XacBank. The GCF has provided USD 20 million to aid Mongolian enterprises in efforts to invest in energy efficiency and renewable energy projects (supplemented with 40 million USD in co-financing from the likes of the European Bank for Reconstruction and Development and the Global Climate Partnership Fund). The project focuses in on Sustainable Development Goal (SDG) 7: Affordable and Clean

<sup>7</sup> [http://www4.unfccc.int/ndcregistry/PublishedDocuments/Mongolia%20First/150924\\_INDCs%20of%20Mongolia.pdf](http://www4.unfccc.int/ndcregistry/PublishedDocuments/Mongolia%20First/150924_INDCs%20of%20Mongolia.pdf)

<sup>8</sup> [http://www.un-page.org/files/public/20160205\\_mongolia\\_sdv\\_2030.pdf](http://www.un-page.org/files/public/20160205_mongolia_sdv_2030.pdf)

<sup>9</sup> <http://www.nama-database.org/index.php/Mongolia>



Energy, and will also work to meet SDG 5: Gender Equality through aiming to ensure that at least 50 percent of all loans are received by women-led micro, small and medium-sized enterprises. Further to this, GCF is also implementing a readiness programme in Mongolia.<sup>10</sup>

The Global Environmental Facility (GEF) has a respectable track record in providing climate-related finance to Mongolia, with several multi-million dollar projects reaching completion before the Paris Agreement even came into force. Projects currently being implemented on the ground—like ASTUD: Mongolia Urban Transport Development Investment Program—are supporting efforts to decarbonize large-scale infrastructure. The project stands as a good example of what development agencies can achieve when they work together, the project has received USD 76.9 million in co-financing to date.<sup>11</sup>

With respect of Mongolia's energy ambitions, there has also been several key developments in deploying renewable energy and energy efficient technologies. Salkhit wind farm will become the country's first wind power project, and will have a capacity of 50 Megawatts. Over 100 Megawatts of new and additional wind power projects are also in the pipeline. Further to this the Asian Development Bank, the World Bank's International Development Association (IDA), and International Bank for Reconstruction and Development (IBRD) have recently initiated multi-million dollar projects that aim to increase energy reliability and sustainability, and further deploy low-carbon energy sources across Mongolia.<sup>12, 13, 14</sup>

An example of national bilateral cooperation comes from the Joint Crediting Mechanism (JCM) with Japan which has been successfully implemented since 2013. The JCM facilitates the diffusion of low carbon technologies and evaluates contributions to GHG emission reductions by applying measurement, reporting, and verification (MRV) methodologies. Although Mongolia receives the projects, the associated emission reductions contribute to Japan's emission reduction efforts.

As for adaptation, Mongolia has progressed with the help of United Nations Development Programme (UNDP), Asian Development Bank (ADB), Adaptation Fund, and the German Development Cooperation Agency in developing and implementing multiple projects on ecosystem based adaptation and water security; disaster risk reduction; and reducing emissions from forest degradation and deforestation (REDD+).<sup>2, 15, 16, 17, 18</sup>

In respect of climate finance, the Mongolian Green Credit Fund was recently launched during the Sustainable Finance Forum in September 2017 under the leadership of the Mongolian Bankers Association. The Government of Mongolia has also approved the legal framework for establishing a Green Development Fund under the Development Bank of Mongolia.

Ulaanbaatar city also plays a crucial role in mitigation and adaptation efforts and evidences the importance of multilateral climate governance. Together with development partners, the Mayor's office is working towards developing a business case to attract climate financing, particularly in the private sector.

<sup>10</sup> <http://www.greenclimate.fund/-/business-loan-programme-for-ghg-emissions-reduction?inheritRedirect=true&redirect=%2Fwhat-we-do%2Fprojects-programmes>

<sup>11</sup> <https://www.thegef.org/project/astud-mongolia-urban-transport-development-investment-program>

<sup>12</sup> <http://projects.worldbank.org/P152343/?lang=en&tab=overview>

<sup>13</sup> <https://www.climateinvestmentfunds.org/projects/upscaling-rural-renewable-energy-solar-pv>

<sup>14</sup> <https://www.adb.org/projects/50088-001/main#project-overview>

<sup>15</sup> <https://www.adaptation-fund.org/project/ecosystem-based-adaptation-approach-to-maintaining-water-security-in-critical-water-catchments-in-mongolia/>

<sup>16</sup> <http://open.undp.org/#project/00072800>

<sup>17</sup> <http://open.undp.org/#project/00086253>

<sup>18</sup> [https://www.giz.de/projektseiten/index.action?request\\_locale=en\\_EN#?region=2&countries=MN](https://www.giz.de/projektseiten/index.action?request_locale=en_EN#?region=2&countries=MN)



## NDC PARTNERSHIP ENGAGEMENT

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Mongolia has been an active and participatory member of the NDC Partnership since joining back in January of this year, and has worked with the NDC Partnership to help build on the momentum that came from the entry into force of the Paris agreement. Mongolia has rapidly progressed within the NDC Partnership through installing designated focal points within the MET and the Environment and Climate Fund.

A key result from these engagements came in the form of an NDC Partnership Forum that was held on the 3rd and 4th of October with over 200 representatives. The Forum was opened by the Minister of Environment and Tourism of Mongolia and attracted representatives from multiple ministries, key private sector and civil society organizations, as well international development partners. The Vice-Minister of Finance was among the key note speakers at the Forum. The NDC Partnership will be moving forward in the coming months to design and implement a Partnership Plan. The work plan will aim to address Mongolia's most immediate needs when it comes to building a low-carbon and climate resilient country.

## OPPORTUNITIES FOR PARTNERSHIP

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### MULTI-SECTORAL MAINSTREAMING AND MODERN TECHNOLOGIES

Transformative change is happening in Mongolia across many sectors, but the nation is still facing some key financial and technical challenges in implementing its NDC and related sustainable development goals.

Key reporting requirements to the UNFCCC, like National Communications and Biennial Update Reports have been dependent on financing and enabling activities from the Global Environmental Facility and United Nations Environment. To meet the reporting requirements in a sustainable and autonomous manner greater efforts are needed to empower and increase capacities in the MET.

The NDC Partnership works to facilitate and coordinate effective technical and financial assistance in order to empower those with climate ambition. The Knowledge Products produced by the NDC Partnership provide resources to help effectively access finance mechanisms and key technical resources. Climate Watch, the NDC Partnership's new data platform—to be released late 2017—will also act as a key resource for those who have interests in climate change related analysis, reporting and policy. The NDC Partnership can provide assistance in forming technical-training workshops with its Implementing Partners (IPs) that focus in on those areas where Mongolia is facing the greatest technical challenges.

As mentioned within Mongolia's Biennial Update Report, there is still work to be done on aligning and harmonizing coordination efforts amongst Mongolia's multiple ministries when it comes to effectively mainstreaming climate policy into national development plans. The NDC Partnership is centralized on the idea that coordination and national mainstreaming are two of the most important factors when it comes to institutionalizing sustainable development into government planning. Mongolia could use the resources of the Partnership to deliver a technical and collaborative dialogue on how best to improve coordination within new governance structures.



Other key challenges that restrict Mongolia effectively mitigating and adapting to climate change come from using dated techniques and technologies, low coal quality, and a lack of support by financial institutions for renewable energy investments. Specifically, Mongolia has mentioned the need for:

- » Clean coal technologies and clean fuel production
- » Power plants with integrated coal gasification combined cycle
- » Carbon capture and storage (CCS) plants<sup>2</sup>

The above measures are subject to high upfront investment and operating costs, however Mongolia sees this as a good opportunity to reduce GHG emissions, if international support is provided.

Still greater ambitions come from Mongolia's Renewable Energy Law which aims to increase the share of renewable energy in total primary energy sources to 30 percent by 2030. Today, coal is still responsible for 80 percent of national energy production, and renewables contribute no more than 3 percent.<sup>2</sup>

Most specifically Mongolia has highlighted its immediate finance needs in the Biennial Update Report that was submitted to the UNFCCC in August 2017:

Transforming construction in Mongolia using supplementary cementitious materials	USD 15 million
Improved insulation of 300 existing panel apartment buildings in Ulaanbaatar	USD 90 million
Installation of 675 MW capacity large hydro power facilities	USD 1,350 million
National Energy Efficient Lighting Program in Mongolia	USD 7 million
Installation of 145 MW solar PV power facilities	USD 573 million
Improved efficiency of coal fired power plants	USD 900 million
Installation of 354 MW wind power facilities	USD 584 million

To access this required finance and implement the above-mentioned projects the NDC Partnership and its members can work with Mongolia and its planning ministries to prioritize projects which require immediate technical assistance, and map and evaluate finance access strategies.

### SOUTH-SOUTH EXCHANGE: INSTITUTIONAL AMBITION AND COORDINATION

Mongolia has made a great deal of progress in the deployment of climate change related policies and projects across different sectors. This is arguably most evident in the climate related laws that have now been institutionalized within Mongolia's governance structure. The Law on Energy and Renewable Energy shows strong commitment and ambition considering that most of Mongolia's energy is still sourced from fossil fuels. Other nations may look to replicate this level of commitment in addressing climate change. High level political will has a profound effect on investor confidence in transitioning towards low carbon and energy efficient investments.

Mongolia has shared their progress on accessing and attracting climate finance with the representatives from the Ministry of Climate Change of Pakistan.

NDC Country Outlook

# MONGOLIA

NOVEMBER 2017



*The NDC Partnership is guided by its partners and assisted by a Support Unit hosted by the World Resources Institute (WRI). The Partnership is co-chaired by the Governments of Germany and Morocco.*

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