



WWF MONGOLIA
CONSERVATION PROGRAMME

NEW PROGRAMME ON GOBI'S GREAT SIX



ULAANBAATAR 2025

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BACKGROUND

“Stepping into the Gobi feels like stepping on the surface of the moon,” this is how most people describe the cold Gobi Desert in southmost part of Mongolia, which is home to some of the world’s most endangered biodiversity. Mongolia is well known by its Gobi Desert, one of the few landscapes where rich diversity of dinosaurs have thrived over 60 million years ago.

The Gobi desert encompasses about 40 percent or over 625,000 square kilometres of total territory of Mongolia where temperatures can rapidly vary up to 35°C in a day, ranging from -47 to 34°C throughout the year. This ecosystem is of exceptional biodiversity significance in global terms – supporting a unique assemblage of plants and animals endemic to the arid central Asian mountains and deserts. The extremely harsh environment has given rise to a unique ecosystem with particularly well-adapted species, many of which are found nowhere else in the world. Amongst the larger mammals of the Gobi desert the ungulates are probably the most important. They are characterised by globally significant populations of the Wild Bactrian camel (*Camelus bactrianus ferus* – IUCN EN), Asiatic wild ass or Khulan (*Equus hemionus* – IUCN NT), Goitered gazelle (*Gazella subgutturosa* – IUCN VU) and Mongolian saiga antelope (*Saiga tatarica mongolica*=*Saiga borealis mongolica* – IUCN EN) in the Gobi ecosystems. The unique large predator of the Trans-Altai Gobi is the endemic Gobi bear (*Ursus arctos pruinosus* – IUCN LC), a critically endangered sub-species (some authorities consider it a distinct species, *U. gobiensis*), with an estimated global population as low as 50 animals. In addition, the Przewalski’s horse (*Equus ferus przewalskii* – IUCN EN) or Takhi, only wild horse on the earth inhabits in steppe and semi-desert steppe in Gobi region.

In Mongolia all these species are classified as very rare and rare and protected by the Law on Fauna and included in the Red list of Mongolian Mammals. Therefore, conservation of these species and their habitats are not only of national priority but also directly contributes to Mongolia’s commitment to the CBD.

Considering the importance of protecting the Gobi ecosystem in holistic way, WWF Mongolia started a public campaign “Gobi’s Great Six” (referred as “GG6”), in September 2016, using the

globally endangered wild Bactrian camel, Gobi bear, Takhi horse, Khulan, Mongolian saiga, and Goitered gazelle as the symbol of Mongolian Gobi and the need for coordinated conservation. Past nine years the campaign already becoming a platform for central governments, government institutions, non-governmental organizations and local communities as well as foreign institutions for coordinating its conservation work of these species and their home, the Gobi ecosystem. The GG6 initiative has already been joined by all provinces that has GG6 flagship species and national and international organizations and conservation communities such as Takhi Group International, Wild Camel Protection Fund (England), and Prague Zoo among others.

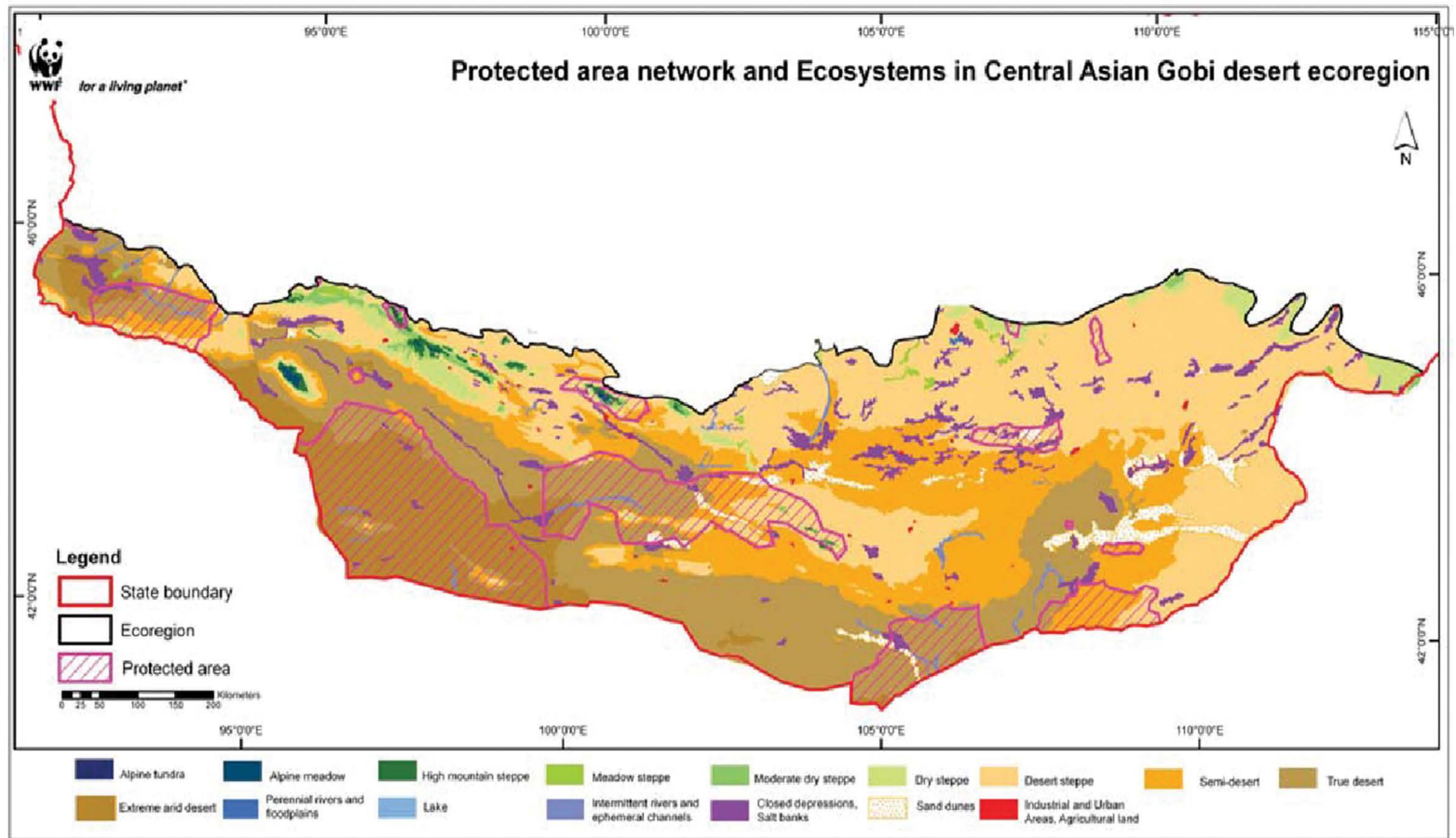
GEOGRAPHIC SCOPE (LANDSCAPE)



The WWF Mongolia team agreed to use the geographical boundary outlined in the 2009 “Filling the Gaps to Protect the Biodiversity of Mongolia” report for the Gobi’s Great Six programme. The report divides Mongolia into four main ecoregions, one of which is the Central Asian Gobi desert, home to the Gobi’s Great Six species. The Central Asian Gobi Desert ecoregion covers more than 5,084,556 sq. km, or 32.3% of Mongolia’s total territory (Map 1).

Moving from Siberia toward the south, one encounters increasingly arid landscapes. Beyond the Altay, Hangay and Hentiy mountain ranges, the dry steppes gives way to the Central Asian Deserts, or so-called Gobi Deserts. Central Asian Gobi Deserts consist of three different sub- regions namely: **The Dzungarian Gobi Desert** includes the desert basin lying between the Altay Mountains on the north and the Tian Shan range on the south and extends into the south-western corner of Mongolia. Because it is exposed in this way to the climatic influences of Siberia, the Dzungarian has colder temperatures and more precipitation than the enclosed basins to the south. **The Alashan plateau** extends from the Tibetan Plateau northward into the Gobi Altay mountain range in Mongolia and exhibits flora and fauna typical of the semidesert and desert of Central Asia. Desert steppe plant species are found primarily at higher elevations, and saxaul forests occur on lower elevation along the dry river beds and sandy surfaces. **The Eastern Gobi Desert** extends from the Inner Mongolian Plateau (China) northward into Mongolia. Vegetation tends to be homogenous across vast areas of the Eastern Gobi Desert and distinct from the vegetation of grasslands to the east and deserts to the west. It consists of drought-resistant shrubs and thinly distributed low grasses.

Map 1. Central Asian Gobi Desert Ecoregion (WWF Mongolia, 2010)



WWF Landscapes: <https://docs.google.com/document/d/1Yf9FS3-lfBxI0m3i-Vhrw6evzd6Z2oIVjc4GuzK85DY/edit?tab=t.0>

<https://wwf-sight-maps.org/wwflandscapes/>

THEMATIC SCOPE:

The development and implementation of the GG6 programme is anchored in three core thematic areas including fundraising, communications and partnership which serve as the fundamental pillars guiding its structure and execution of the programme's goals, outcomes and outputs.

FUNDRAISING



A thematic focus on fundraising will support the successful development and implementation of GG6 programme that support the WWF Mongolia OSP for the period of 2025-2030. This programme requires sustained resources to address complex and long term challenges. Ongoing investments in habitat restoration, protected area management, community engagement and policy & advocacy can be broadened if GG6 programme is endorsed at the national and international level. Without dedicated fundraising, these essential interventions risk being short-term and fragmented, limiting their effectiveness.

A strong and focused fundraising strategy can raise and diversify funding sources by leveraging public and private sector contributions, philanthropic support, and community-based financing. For example, securing long-term funding from the Natural resource use fee can sustain habitat restoration such as protecting natural springs that reduce climate vulnerability both local communities and wildlife.

COMMUNICATIONS



A thematic focus on communication is essential for the success of a GG6 programme because it raises awareness, builds public and political support, and fosters positive attitudes toward ecological processes. Effective communication helps to bridge the gap between conservation efforts and the communities living with GG6, ensuring their experiences and challenges are heard and addressed. Effective storytelling can also encourage global support. Clear messaging about the ecological and cultural value of GG6 can also counter misinformation and policymakers to adopt and implement holistic and integrated NRM. Consistent outreach through diverse channels (e.g., social media, documentaries, community radio) can engage local and global audiences, inspiring action and funding.

PARTNERSHIPS



Partnerships are vital for the development and effective implementation of GG6 programme because they leverage diverse expertise, resources, and local knowledge to drive sustainable solutions. Partnerships can be extended based on successful public campaign "Gobi's Great Six" started in September 2016 by WWF Mongolia. By building partnerships with key players both on investors, scientific communities and local communities, the programme can co-create long-term ownership and sustainability. Collaborating with government agencies ensures alignment with national policies and facilitates the integration of NRM management into broader conservation and development agendas. Partnerships with research institutions provide scientific insights to inform evidence-based interventions; while working with private sector stakeholders such as the tourism services can unlock innovative solutions and financial support.

SITUATION ANALYSIS

POLITICAL



The ADB commissioned report titled “Mongolia’s economic prospects: Resource-rich and landlocked between two giants”¹ has assessed Mongolia as follows:

Mongolia’s governance indicators have long been an anomaly in Asia, viewed both in terms of the country’s state socialist past and in its place in the world today. Freedom House, in its yearly Freedom of the World survey, has categorized Mongolia as a “free” country since 2014 on the basis of its popularly supported democratic decision-making processes.

In Freedom House’s 2020 survey, Mongolia scored 84 on a scale ranging from 0, scored by Syria, to 100, scored by Finland, Norway, and Sweden. Mongolia’s civil rights have consistently scored 2 (7 = lowest, 1 = highest) on Freedom House’s Freedom in the World report. For Freedom House’s political rights subcategory, Mongolia consistently gets high scores for electoral process and extent of political pluralism. It scores less well for the subcategory of the functioning of government.

Mongolia’s State of Environment report² noted that as of 2018 Mongolia has enacted 22 National Programs dedicated to environmental causes, starting from National Program on Protected Areas (1998), Biodiversity (1998, 2015), Water (2010), Climate Change (2011), Desertification Control (2010), Rare and Endangered Species (2011) and Education for Sustainable Development (2018). These National Programs and follow-up implementation action plans do provide sufficient basis for prioritization, coordination and implementation of required interventions. However, funding of those actions, especially for those of needing soft and physical investments, continue to be the main challenges.

1 Helble M., Hill H. and Magee D. (eds). 2020. Mongolia’s economic prospects: Resource-rich and landlocked between two giants. ADB, Philippines.

2 State of Environment of Mongolia. 2019. Ministry of Environment and Tourism. Ulaanbaatar

TNC's Eco-regional Assessments for Steppe³, Gobi⁴, Western Mongolia⁵ and Khangai Khuvsgul⁶ as well as review and assessment report "Expanding the Protected Area Network in Mongolia"⁷ provide sound planning tool for prioritization and designing the protected areas and important biodiversity areas in support of above national programs.

Based on these assessments, as of today Mongolia has already identified 215 critical areas that formed foundation of a National Conservation Blueprint that is now guiding national and local governments to designate protected areas important to people and nature. 131 of these critical areas are included in the next 10-years' "National Land Use Master Plan"⁸.

International organization supported assessments such as Biodiversity gap analysis⁹, Protected area financing assessment¹⁰, PA sustainability options¹¹ and especially reports commissioned under UNDP-BIOFIN project (PIR, BER, FNA, BFP)¹² provide substantial methodologies and cost estimates that could be used for the costing PA and biodiversity conservation financing in Mongolia.

These assessment reports show that at current level the state fund allocation to the Protected Areas cover the minimum staffing needs that costs at least 80% of the total budget allocation and only some 13-20% of the budget is allocated for other essential activities. The PA financial gap analysis shows that as of 2015 the funding need for PA network (inclusive National and Local PAs) is estimated at MNT 20.8 bln (~USD 7.56 mln) with financial gaps of MNT 13.4 bln (~USD 4.87 mln), i.e., the current budget allocation covers only 35.6% of required budget. Therefore, the country needs to increase

- 3 Heiner M., et al. 2011. Identifying Conservation priorities in the face of future development: Applying development by design in the grasslands of Mongolia. TNC Mongolia, Ulaanbaatar
- 4 Heiner M., et al. 2013. Identifying Conservation priorities in the face of future development: Applying development by design in the Mongolian Gobi. TNC Mongolia, Ulaanbaatar
- 5 Heiner M., et al. 2017. Identifying Conservation priorities in the face of future development: Applying development by design in the Western Mongolia (Mongol Altai Mountains, Great Lakes Depression and Lakes Valley). TNC Mongolia, Ulaanbaatar
- 6 Heiner M., et al. 2017. Identifying Conservation priorities in the face of future development: Applying development by design in the Khangai Khuvsgul. TNC Mongolia, Ulaanbaatar
- 7 Batjargal Z., Shirevdamba Ts. 2017. Expanding the Protected Area Network in Mongolia. TNC Mongolia, Ulaanbaatar
- 8 On the approval of National Land use Master Plan. 2018. The Government Resolution #384. Ulaanbaatar
- 9 Chimed-Ochir et al. 2010. Filling the gaps to protect biodiversity of Mongolia. WWF Mongolia, Ulaanbaatar.
- 10 Methodological guideline for assessing the protected areas financing and its results. 2015. UNDP-SPAN project report
- 11 Financial sustainability options for Mongolia's specially protected areas. 2011. UNDP-SPAN project report
- 12 BIOFIN Mongolia publications <https://www.biodiversityfinance.net/knowledge-platform?country=56&type=9>

the current expenditure to the PA network by 2.8 times to ensure effective management of PA network alone.



SOCIAL

The National Human Development Report 2024¹³, commissioned by UNDP has assessed that “Over recent decades, Mongolia has made steady progress in human development with promising achievements in health, education, and income. However, in recent years progress has faltered as measured by the human development index (HDI).”

Between 2009 and 2023, GDP per capita rose from \$1,718 to \$4,040, enabling creation of more jobs mostly in low-paying sectors.

As of 2023, around half the employed population work in the service sector, 22 percent in the production sector and agriculture sector absorbs over 22 percent of the labor force. The average annual income of a herding household is around \$5,000, which is on par with the national average, but their incomes depend on the types of animals a family keeps and their proximity to urban centres. On average, earnings from the sale of milk constitute a third of the income. When herders are unable to sell their milk, many resort to selling their livestock. The absence of state support, especially since the fall of communism in 1990, has left herders to fend for themselves. As of 2019, many were in debt. The majority of nomadic herders are vulnerable to climate related disasters, especially extreme winter weather conditions called ‘dzud’. After losing their livestock, herders have no other sources of livelihood, and they tend to migrate to urban centres in search of menial jobs. Among vulnerable populations, are the large number of households in aimags outside the capital who particularly rely on jobs in mining and herding livestock, reindeer and other animals, which limits their economic mobility and makes them vulnerable to industry- specific downturns and extreme weather conditions, underscoring the need for economic diversification and their integration in resilient economic activities.

In September 2023, the overall unemployment rate was 5.2 percent. There is also a clear urban-rural divide. Unemployment is highest, 15 percent, in Govi Altai province, followed by 13 percent in Bayankhongor. The women’s labour force participation rate was only 52 percent, compared to men at 66 percent. And though women tend to have better education rates than men they only

¹³ National Human Development Paper 2024: A just Energy Transition for Human development in Mongolia. 2024. UNDP Ulaanbaatar, Mongolia. 108pp. ISBN 978-9919-9177-1-5

occupy 43 percent of managerial positions, and they face a gender wage gap of 6.7 percent.

ECONOMIC



The WB commissioned “Mongolia Economic Update”¹⁴ reported that Mongolia’s economy has recovered but the current economic expansion was largely driven by strong coal exports. Despite the contraction in agricultural production attributed to harsh weather conditions, the economy expanded by 7.1 percent in 2023. Growth was mainly driven by coal mining and related transportation services. Indeed, coal exports rose to 91 percent above their pre-pandemic (2018-2019) average. This was primarily driven by higher demand for coal from China. Public and private consumption growth also supported the economy, spurred by rising household income and the 2023 supplementary budget. Public consumption increased by 5.4 percent in 2023, boosted by an acceleration in the third quarter of the year reflecting the 2023 supplementary budget that increased public spending on goods and services. Private consumption also accelerated in the second half of the year, supported by rising wages (including public wages) and declining inflation.

The medium-term growth outlook remains favorable, mainly supported by the mining industry. Economic growth is expected to reach an average of 6.4 percent over 2025- 2026, driven by a substantial increase in mineral production of the Oyu Tolgoi (OT) mine, the largest copper mine in Mongolia, which is planning to more than double its 2023 production by 2025. The outlook is subject to significant risks. The economy could face negative spillovers from weaker-than-anticipated growth in the Chinese economy (including due to a protracted real estate market slowdown which could dampen steel demand for which Mongolian coal is a major input), and an escalation of geopolitical tensions resulting in a higher price of imported oil. Domestically, a more severe and prolonged dzud would lead to a greater contraction in agriculture production, while a greater-than expected fiscal expansion would lead to wider fiscal and current account deficits and elevate inflationary pressures.

Although Trump-induced trade war has relatively minimal direct impact top economy of Mongolia, its spillover from China-US deadlock might severely hit the coal and copper dependent economy. The USA government aid restructuring included complete halt of USAID program in Mongolia costing USD3 million, and impact of trade war yet to be assessed.

14 Mongolia Economic Update. May 2024. Office of the Publisher, The World Bank, Washington.

CLIMATE AND ENVIRONMENT



With little over 3 million people, living in an area of 1.567 million square kilometres, Mongolia is one of most sparsely populated country in the world. The actual density in the rural areas even less, considering the fact that over 50% of the population lives in urban areas. Despite the fragile ecosystem, extremely vulnerable to many forms of economic exploitation, Mongolia as a country continues to be the last haven for endangered wildlife and undisturbed ecosystems and unique biological diversity formed under influences of taiga forest, grassland steppe, cold desert and snow peaked mountain ranges.

As of 2018, the vascular plants of Mongolia consisted of 3163 species, of which 16.2 % were assessed as “Threatened” in accordance with IUCN category. The diversity of lower plants, including fungus, is still not assessed fully and has been expanding by dozens of new species every year. The fauna of Mongolia includes 78 fish species (47 genera, 15 families), 6 species of amphibians (5 genera 4 families), 23 reptile species (15 genera, 7 families), 513 birds species (235 genera, 69 families) and 140 species of mammals (81 genera, 24 families). Sadly, 22.6 percent of mammals, 7 percent of birds and 17.9 percent of fish species in Mongolia are classified as “Threatened” due to habitat loss, unsustainable harvesting, poaching and climate change¹⁵.

The designation of 30% of the country under NPA and their sound management combined with sustainable management of natural resources around these NPAs will play important role not only at national, regional level but are of global importance because it translates protection of few unaltered ecosystems in the region and populations of globally endangered Snow leopard, Argali sheep, Siberian ibex, Mongolian saiga, Wild ass, Takhi - wild horse, cranes, great bustard and many others. Lakes and wetlands inside NPAs serve critical stop over, congregating and breeding sites for Central Asian The Central Asian Flyway (used by 182 species, including 29 globally threatened and near-threatened species)¹⁶ and East Asia Australian Flyways (used by 492 migratory bird species, including 64 globally threatened and near-threatened species)¹⁷.

From the climate change perspective sustainable management of rangelands by local communities is expected to reverse the

15 Mongolia’s 6th National Report to the Convention of Biological Diversity. MET, Ulaanbaatar, 2019

16 Central Asian Flyway action plan for the conservation of migratory waterbirds and their habitats. CMS/CAF/Report, New Delhi, 2005

17 https://www.birdlife.org/sites/default/files/attachments/8_East_Asia_Australasia_Factsheet.pdf

degradation of rangeland, and thus mitigating climate change impacts from improved carbon sequestration and avoidance of potent GHG from highland peatlands which is becoming major challenge for Mongolia as the country became 7th largest emitter with estimated 45 Mton CO₂/a, while being ranked at 16th by the size of peatland occurrence¹⁸. It is estimated that the entire grassland ecosystem of Mongolian Plateau acted as a sink 31 TgC/year¹⁹, with forest steppe (~80gC/m²/year), meadow steppe (~70-80gC/m²/year) and steppe (~60-75gC/m²/year) ecosystems having highest expressed carbon sequestration compared to semidesert steppe (~20-30gC/m²/year)²⁰. However, climate change impact coupled with anthropogenic pressures (especially overgrazing) might turn the Mongolian grassland from carbon sink to carbon emitter.

In accordance with the Law on Protected Areas the traditional animal husbandry is allowed in Nature Reserves and limited use zones of National Conservation Parks. The UNDP commissioned report shows that as of 2012, there was 22.5 million of livestock in 189 counties and 4 districts of Ulaanbaatar city which overlap with all 99 PAs in Mongolia²¹. At that time this represented 55% percent of national livestock number, meaning over a half of the livestock of Mongolia directly and indirectly benefiting from PA network (the report was based on entire county level, which designates up to 30% of its land to PA at highest, therefore herders benefiting from PA might be lower²²).

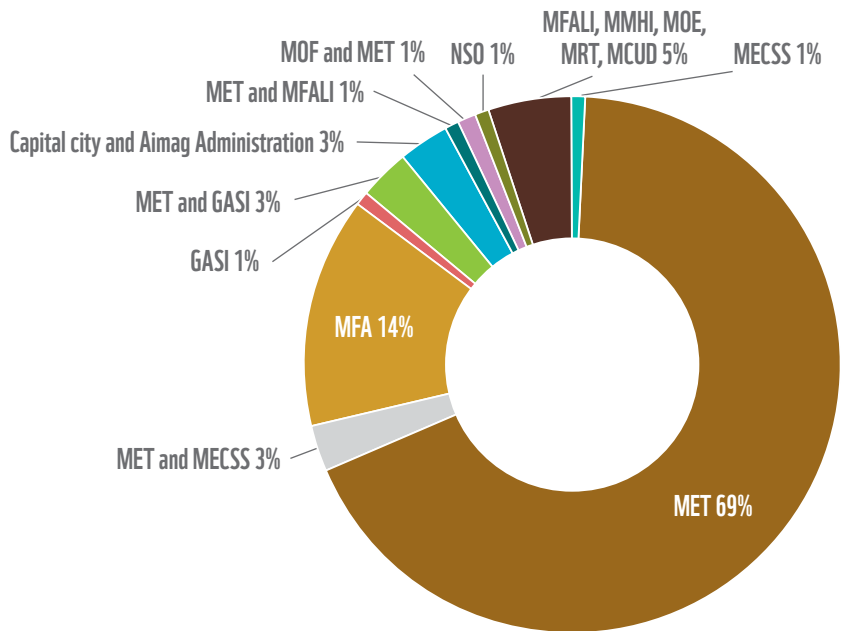
INSTITUTIONAL



UNDP commissioned “Financial needs assessment for biodiversity report²³, estimate that a total of 9 ministries, 9 agencies, 3 local administrations and 8 non-government organizations have been identified as main national level stakeholders in the implementation of Mongolia’s National Biodiversity Program (NBSAP). International and donor organizations, branches of international NGOs involved in support the implementation of NBP were considered as external sources, but not as stakeholders.

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- 18 Joosten, H. 2009. The Global Peatland CO₂ Picture. Peatland status and emissions in all countries of the World. Ede, Wetlands International.
- 19 Y Lu, Q Zhuang, G Zhou, A Sirin, J Melillo and D Kicklighter. 2009. Possible decline of the carbon sink in the Mongolian Plateau during the 21st century. Environ. Res. Lett. 4
- 20 Qinxue WANG, Tomohiro OKADERA, Eer DENI. 2017. Livestock Grazing and Terrestrial Carbon Sequestration in Mongolia. 5th iLEAPS Science Conference, 11th-14th September 2017, Oxford, UK
- 21 Marlon Flores, Ganzorig G., Khorolmaa S. 2015. An economic valuation of contribution of ecosystem services of the network of Protected areas to the economy of Mongolia. MET-UNDP. Ulaanbaatar
- 22 Writer’s note
- 23 A. Bakey (ed). 2020. Financing Needs Assessment for Biodiversity (FNA) Report Mongolia. UNDP-BIOFIN project. Ulaanbaatar, Mongolia

Of these institutions, the Ministry of Environment play the major leading role responsible for the 69% of all interventions included in the program. Over the past decades the Environmental sector employee increased from 2130 in 2008 to 3119 in 2020²⁴. In 2020, the Government has allocated MNT 5.7bln to support the forestry, MNT 11.1bln for PA management, MNT3.6bln to support IWRM, MNT77.3 bln to address air pollution, MNT 19.0 bln as investment in environment sector. At the same time, the re-investment of natural resource use fee at local level underperforming and only 36.5% of what should have been re-invested in natural resource protection and management. The implementation of these investments are carried out on the ground via the PA Administrations, River Basin Authority, forestry agencies and provincial and county Governors office.



The Environmental Protection Law²⁵ was amended in 2012 and Article 8 was adopted to provide a legal basis for collaborative management of natural resources. It defined collaborative management of natural resources as a process under which local people organized as a Nukhurlul (CBO) have the right to manage

24 State of the Environment of Mongolia 20218-2019. 2020. Ministry of Environment. Ulaanbaatar, Mongolia
 25 Law on Environmental Protection. 1995. Parliament of Mongolia. <https://www.legalinfo.mn/law/details/8935?lawid=8935>

(use, protect, rehabilitate) natural resources. Transparent and democratic principles should govern the process, and the CBO members are entitled to derive social and economic benefits.

Article 8 defines as key stakeholders in the co-management process CBOs, Soum citizen khural (local parliament), Soum governor, Environmental officer, and the entity/NGO involved in conservation work.

As a part of the efforts for supporting decentralized participatory decision making, the revised Law on Budget (2011) foresaw establishment of “Common Fund for Supporting Local Development” which is endowed from VAT fee (5%), mining fee (5%) from certain types of minerals, grants and contributions from international and national NGO supported projects programs focused on local development and oil use fee (30%). The funds received by the counties and districts based on elaborate calculation (based on local development index, population, distance and size of territory and local tax collection level) are disbursed through bottom-up approach, i.e., done through prioritization of investments based on all citizens input²⁶.

There are also “County Development Fund” and SME Development Fund” that operate at county level. These funds are soft loan windows managed by the local government that aims to support local development initiatives in the area. However, operations of all these funds have mixed results due to small scale and full dependence from the Central government, which in turn allocates its funds spreading thinly to all counties.

Although the above-described three funds do not spell out the environment as a priority, it is assumed certain environmental conservation and natural resource use related investments are funded based on local community, individual’s demand.

In December 2020, The Parliament had passed long waited by conservation community, law on taxation of livestock, the revenue of which will be collected locally and re-invested for pastureland and nomadic husbandry improvement. Although enacted, the implementation of this law has been very patchy due to populist politics.

26 Law on Budget. <https://www.legalinfo.mn/law/details/12254>

STAKEHOLDER ANALYSIS

	Stakeholder Name	Stakeholder Description	Stakeholder Type	Engagement Stage (planning, Implementation, MEL)	Engagement methods & strategies	Due Diligence (Y/N)
READ Me First	<p>Please list key groups of stakeholders (people and organizations) who will be influenced by, have an impact on, or will help implement conservation to engage during the Programme planning, implementation, monitoring, and learning.</p> <p>Max 20 words.</p> <p>See Guidance by PPMS Step - Element 1.4</p>	<p>Please briefly explain the significance of engaging with the stakeholder, and what you expect from the effective engagement.</p> <p>max 200 words</p>	<p>Please indicate the type of stakeholders (individual or organization):</p> <ul style="list-style-type: none"> - Indigenous People & Local Communities - Civil Society Organization - Government's / Public Sector Organization - Companies / Private Sector - Universities / Research Organization - Other 	<p>Please indicate what stage each stakeholder group will be engaged</p> <ul style="list-style-type: none"> - Programme planning, implementation, M&E, and Learning, etc. 	<p>Please describe how each stakeholder group will be engaged. Make sure that stakeholders will have regular access to the Programme information and, as appropriate, are aware of complaints procedures and feedback mechanisms.</p>	<p>For corporate & philanthropic partners (major donors, trusts, and foundations), please indicate if the due diligence is already conducted or not. For Other stakeholders, put NA.</p> <p>Corporate Partnership Rules & Guidelines</p> <p>Philanthropy Due Diligence</p>
Government organizations at national level						
	Ministry of Environment and Climate change	The Ministry is responsible for environmental policies, climate action, biodiversity conservation, and natural resource management. It plays a central role in formulating regulations and overseeing conservation efforts. We will collaborate with the Ministry to ensure effective participation and meaningful dialogue among stakeholders in protected area (PA) management, GG6 species conservation, wildlife-friendly infrastructure, and environmental law enforcement.	Government	Planning, implementation, M&E, and learning	Policy development, legal framework support, technical recommendations, joint trainings, meetings, collaborative initiatives, awareness raising, information/ data sharing	NA

	Ministry of Justice and Home Affairs	The Ministry of Justice and Home Affairs – the government Lead agency for Environmental Crime Prevention Council and Border Troops – important players in wildlife crime prevention and cross border collaboration for wildlife migration and monitoring.	Government	Planning, implementation, M&E, and learning	Legal framework support, meetings, joint training, joint events on prevention from illegal wildlife crime and information sharing	NA
	Ministry of Road and Transportation	The Ministry is a key stakeholder in infrastructure development and its impact on biodiversity and ecosystems. It is responsible for policy development, planning, and regulation of Mongolia's transportation networks, including roads, railways, and other transit corridors.	Government	Planning, implementation, M&E, and learning	Policy development, legal framework support, technical recommendations, joint trainings, meetings, collaborative initiatives, awareness raising, information/ data sharing	NA
Government organizations at local level						
	Local Governors' Offices (provincial and soum level)	At the local level, Provincial and Soum Governor's Offices, Citizens' Khurals, Environment Departments, Protected Area Administrations, River Basin Authorities, Veterinary Departments, and Border Units in intervention areas play crucial roles in the successful implementation of the project, as well as in securing buy-in and replicating pilot demonstration results. Without the full support of these local government structures, the success and sustainability of any intervention will be compromised.	Government	Implementation	Meetings, information sharing	NA
	Citizens Khural		Government	Implementation	Meetings, information sharing	
	Protected Area Administrations		Government	Implementation, learning	Agreements, training, meeting, study tours, field trips	NA
	Department of Environment		Government	Implementation, learning	Agreements, training, meetings, workshops, events	NA
	River Basin Authorities		Government	Implementation	Agreements, meetings, events	NA
	Boarder Unit		Government	Implementation, learning	Agreements, meetings, awareness campaign	NA
	Department of Veterinary		Government	Implementation	Joint activity, information sharing	NA

Local communities						
	Herders	Support and collaborate with local communities—both as groups and individual households—in sustainably managing natural resources by revitalizing their millennia-old tradition of nomadic animal husbandry while helping them adapt to the challenges of globalization and the free-market economy. Engage with local communities and vulnerable groups, such as women and children, through idea-sharing, information exchange, and active participation in events to enhance conservation efforts.	Local community	Planning, implementation, MEL	Consultation and introductory meetings, training, awareness campaigns/events, surveys	NA
	Herder Coops		Local community	Planning, implementation, MEL	Consultation, meetings, training, events, feedback meetings	NA
	Volunteer Rangers		Local community	Planning, implementation, MEL	Training and meetings; occupational safety and health	NA
	Local Media		Local community	Implementation	Events and meeting; media products	NA
	Eco clubs/youths		Local community	Implementation, MEL	Training program, joint events, feedback surveys (incl. parents and guardians)	NA
	Women CSOs		Local community	Implementation, MEL	Events, joint workshops, feedback meetings	NA
Institutions						
	National University of Mongolia	Contribute to conservation through research, education, policy support, community engagement, technological innovation, and partnerships for resource mobilization.	University	Implementation	Training, research	NA
	Khovd University		University	Implementation	Training, research	NA
	Mongolian Academy of Sciences		Research organization	Implementation	Research, data sharing	NA

Others						
	National Association of Mongolian Agricultural Cooperatives (NAMAC)	Collaborate in intervention areas to build capacity, enhance the well-being of local communities, and diversify their income sources.	Civil Society Organization (CSO)	Implementation, MEL	Partnership in cooperative development; consultancy service, training, assessment	NA
	Mongolian National Confederation of Credit Union (MOCCU)		Civil Society Organization (CSO)	Implementation, MEL	Training for local Savings and Credit Unions, local financial literacy; support to households enterprise development	NA
	WCS	Partner for advocacy and the promotion of an enabling environment for the sustainable management and conservation of biodiversity, as well as resource mobilization. Moreover, this partnership will help leverage additional financial and technical resources to achieve conservation targets.	Other	Implementation	Meetings, joint research, information sharing (upon need)	NA
	ADAPT		Other	Implementation	Meetings, information sharing (upon need)	NA
	KfW		Other	Implementation	Meetings, information sharing (upon need)	NA
	TNC		Other	Implementation	Meetings, information sharing (upon need)	NA
	Media and marketing agencies	Partner with media and marketing agencies to support conservation by increasing public awareness, influencing policy discussions, promoting sustainable behaviors, advocating for environmental protection, and expanding the reach of conservation efforts.	Private Sector	Implementation	Dissemination information and best practices	NA

FOCUS AND GOALS

At the focus level, **Gobi's threatened migratory species**, including the Bactrian camel, Gobi bear, Takhi horse, Khulan, Mongolian saiga, and Goitered gazelle, is prioritized, with an emphasis on expanding efforts and implementing more targeted interventions.

KEY THREATS TO THE CONSERVATION FOCUS

The habitat fragmentation and loss caused by human and livestock taking over the grazing land and water sources as well as mining fuelled infrastructure development are considered the main root cause of species and ecosystem loss. The situation is further exacerbated by the climate change impact that dry out the few surface water sources and poaching -infrequent- yet still impacting the wildlife population. The survival of globally threatened Gobi species in the Gobi's Great Six area is jeopardized by nine direct threats, which are ranked from low to very high in scope, severity and irreversibility, with the overall assessment concluding a **very high** target rating. Based on expert opinions, available data, and relevant assessment studies aligned with the programmatic focus, two threats—climate change and trampling water sources—are identified as posing Very high risks. Additionally, wildlife-unfriendly linear infrastructure, mining, and disease transmission are assessed as High-level threats, while poaching, overgrazing, and unregulated tourism are considered Medium-level threats. The Unregulated natural resource use particularly shrub cutting for firewood assessed as Low level threat (Table 1.)

Table 1.
Threat Ratings -
Table

	Threats \ Targets	Survival of globally threatened species
■	Trampling water sources	Very High
■	Climate change	Very High
■	Wildlife unfriendly linear infrastructure	High
■	Mining	High
■	Disease transmission	High
■	Poaching	Medium
■	Overgrazing	Medium
■	Unregulated tourism	Medium
■	Unregulated natural resource use (shrubs)	Low
Summary Target Ratings:		Very High

CLIMATE CHANGE:



In accordance with the Mongolia Third National Communication to UNFCCC²⁷, the near-surface temperature and its annual mean over Mongolia have increased by 2.24°C between 1940-2015, with warming intensity higher in a mountainous region and less in the steppe and Gobi region. It is also recorded that there was no significant change in total annual precipitation during last 76 years. However, winter snow was increased by 22% since 1940 and 40% since 1961, indicating it is linked to high-intensity global warming. At the same time, drought conditions have been increasing since 1940; especially consecutive drought years are continued since 2000. Climate change impact on natural zone boundaries and its shift based on degree of dryness and NPP²⁸ as well as analyses vegetation index (Qz) value based on climate change warming and some elements of water balance data²⁹ from future climate scenarios both indicate that vegetation zones will move to the north and semidesert and steppe zones will likely expand and forest-steppe and steppe areas decrease especially in 2080. About 10 different types of natural disasters occur in our country, which causes significant damage to the socio-economy of the country. Some statistics registered since 1989, show that about 49 extreme and disastrous events related to the atmospheric phenomena occur in Mongolia in every year. It is estimated that frequency of disastrous events related to the atmospheric phenomenon is expected to increase by almost 23-

27 Mongolia Third National Communication. 2018. ed. Z. Batjargal. MET, Ulaanbaatar. 346p

28 Mongolia Assessment Report on Climate Change. 2009. Eds. D. Dagvadorj, B.Khuldorj, Aldover R.Z. MET. Ulaanbaatar. 226p.

29 Assessments of climate change and anthropogenic impacts into hydrological systems of Onon, Kherlen and Khalkh river basins, Mongolia. 2009. Ed. N.Batnasan, WWF Mongolia, Ulaanbaatar. 71p.

60% by the middle of this century in any climate change scenario. The assessment of future projection for drought and dzud indicates that the drought frequency is expected to increase by 5-15% under moderate scenarios of GHG and by 20-45% under high emission scenario by 2080. The frequency of dzud is expected to increase by 5-20% under moderate scenario and in case of high emission scenario 40-45% increase is expected to observe in the north of Mongolia by 2080.

Climate change impacts on biodiversity in Mongolia has not been fully understood and documented due to its multifaceted impact. WWF³⁰ and UNDP commissioned studies as well the Mongolia's National reports to the UNFCCC^{31 32} focus mainly on habitat modelling to estimate size of relic area and distribution area of selected species. However, climate change impacts could be divided into direct and indirect threats in turn each could also be clustered further:

- 1) direct threat due to ecosystem alteration such as natural boundary shift, permafrost, peatland and wetland shrinking that has slow but irreversible nature affecting population survival and reproductive success;
- 2) Direct threat due to extreme weather event such as heat, cold waves, heavy snow, rain, flashfloods and windstorms causing direct mortality,
- 3) Indirect threat, caused by habitat encroachment such as high mountain pasture, open water sources occupied by livestock and herder settlements displaced by the climate change impact and subsequent HWC, and
- 4) Combined direct and indirect threat due to land conversion and especially for irrigated farm land as coping mechanism for crop sector for climate change impact (state policy on food security and safety³³)

TRAMPLING WATER SOURCES



The livestock concentration around open water sources in the Gobi Desert of Mongolia poses significant environmental threats to biodiversity, leading to a range of ecological challenges. With the scarcity of water in the Gobi Desert, herders tend to concentrate livestock near the few available water sources. This leads to

30 Report on Climate Change Vulnerability Assessment of Snow leopard and its some prey species in Altai Sayan Ecoregion of Mongolia. 2015. WWF Mongolia. Ulaanbaatar. 60p.

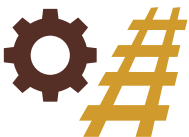
31 Mongolia Second Assessment Report on Climate Change. 2014. Eds D. Dagvadorj, Z. Batjargal, L. Natsagdorj. MET, Ulaanbaatar.

32 Mongolia Third National Communication. 2018. ed. Z. Batjargal. MET, Ulaanbaatar. 346p

33 Хүнсний хангамж, аюулгүй байдлыг хангах талаар авах зарим арга хэмжээний тухай. legalinfo.mn/mn/detail?lawid=16530824651591

overgrazing of vegetation around waterholes, which results in the depletion of plant species. As livestock gather around water sources, the water quality tends to decline. Animal waste, urine, and even carcasses can pollute water supplies, making it toxic for both human and animal consumption. This pollution impacts not only livestock but also wild species that rely on the same water sources. In addition, the concentration of livestock and human settlements around water sources can create competition for water, which can lead to over-extraction, ultimately reducing water availability for wildlife. Over-exploitation of these resources for human and livestock needs can lead to a shortage of water for wild animals, threatening their survival and distribution. As human settlements and herding activities become concentrated around water sources, wildlife habitats become fragmented. This can lead to isolation of species populations, reducing genetic diversity and making it harder for species to find food, shelter, and mates. As wildlife becomes more concentrated around the few remaining water sources, they are at greater risk of encountering human settlements and livestock. This leads to increased human-wildlife conflicts, including hunting, poaching, and competition for resources. Furthermore, the Gobi Desert is already experiencing the effects of climate change, such as increasing temperatures and extended droughts. These factors reduce the availability of water sources, making it even more difficult for both humans and wildlife to survive. In terms of socio-economic point of view, the concentration around water sources and subsequent overgrazing may initially provide economic benefits, but the long-term consequences—such as land degradation and reduced livestock productivity—can threaten their livelihoods. At the same time, the scarcity of water and the depletion of natural resources can also disrupt traditional ways of life for Mongolian herders, forcing them to shift their practices or abandon traditional grazing areas.

WILDLIFE UNFRIENDLY LINEAR INFRASTRUCTURE



Linear infrastructure such as roads, railways, gas pipelines and power transmissions lines are often related to the extractive industries divides, fragments and even isolates wildlife populations, especially in the case of *fenced* railroads, disrupting (seasonal) migration and reducing genetic diversity and disturbance through increased noise. The Trans-Mongolian Railroad, fenced since 1955 to prevent collisions between trains and livestock, has long posed a significant barrier for Mongolian gazelles, contributing to the extinction of local populations in their western ranges. The fencing along various railroads in Mongolia, designed to keep livestock away from the tracks, has become a critical environmental issue,

acting as a barrier that impedes wildlife movement and fragments their habitats.

With only 13% of its approximately 50,000 km road network paved, the “VISION-2050” Long-term development policy of Mongolia” document aims to build 4838 km new railways to support the agricultural, industrial, and mining sectors by 2050.

The desk study by WWF-Mongolia on impact of linear infrastructure on migratory species³⁴, and subsequent consultations found that the planned railroad could have severe impact of migratory ungulates of Mongolia. It is expected that Mongolian gazelle populations will be divided into nine isolated populations separated by railway and border fences, while the khulan populations will be divided into five and the goitered gazelle populations into seven populations respectively. The Mongolian saiga population will be isolated as two separate populations. The planned road constructions will be in parallel with railroads in critical habitats and will go right through the Mongolian saiga and gazelle, as well as the khulan and goitered gazelle's populations.

In addition, electrocution and collisions on power lines are among the leading causes of non-natural mortality for birds. Power lines are increasing exponentially, but mitigation strategies to prevent bird mortality remain questionable. At least 30 species of electrocuted birds have been recorded in Mongolia, which has one of the highest electrocution rates worldwide³⁵. In Mongolia, thousands of birds of prey and other species die annually from electrocution, primarily on medium-voltage electricity transmission lines. The Saker Falcon accounts for over half of these electrocuted birds, with estimates indicating that between 800 and 4,000 Saker Falcons are electrocuted each year (WSCC, 2019). To mitigate this issue, remediation efforts, such as retrofitting power lines, must be implemented on a large scale, which carries significant cost implications. Therefore, there is an urgent need to identify efficient and cost-effective measures to address the problem of bird electrocution³⁶.

34 B. Lkhagvasuren, B. Chimeddorj, D. Sanjmyatav. 2011. Barriers to Migration: Case Study In Mongolia (Analysing the Effects of Infrastructure on Migratory Terrestrial Mammals in Mongolia). WWF Mongolia, Ulaanbaatar. 42p.

35 Adrian Orihuela-Torres et al. 2021. Avian-power line interactions in the Gobi Desert of Mongolia: are mitigation actions effective?

36 Andrew Dixon et al. 2017. Avian electrocution rates associated with density of active small mammal holes and power-pole mitigation: Implications for the conservation of Threatened raptors in Mongolia

MINING



To date, Mongolian mining sector has one of the world's leading mineral resources with more than 10,000 deposits of more than 80 types of minerals. It makes up about 93% of the total exporting products, about 58% of the FDI and 22.8% of the GDP. Currently, there are 2,557 valid licenses issued in the mining sector with 1,708 of them being mining licenses and 849 exploration licenses³⁷. The main minerals produced by the mining sector include copper concentrate, molybdenum concentrate, coal, gold, fluorspar concentrate, iron ore and zinc concentrate.

While legal and responsible mining can contribute to conservation or at least minimize damage, illegal, artisanal mining constitutes a big and complex environmental and social problem in certain areas³⁸.

Aside from the site-level impacts, mining impacts to vegetation and groundwater can extend far from the mine footprint (pit and infrastructure). Water extraction for mining operations causes drawdown of near-surface groundwater in the local cone of depression, and potentially over large distances depending on groundwater hydrology, affecting wells, springs and vegetation productivity, reducing water and forage availability, and impacting groundwater dependent systems such as oases, elm stands and Saxaul forests. Mine operations and high traffic on mining roads also create large amounts of dust that can travel far and affect vegetation growth. Though the direct impacts of mining on land and water are significant and can reach far beyond the mine site, perhaps the most urgent threat to wildlife is created by transportation infrastructure and traffic to support mining operations that create barriers to movement³⁹.

The global energy security concern and construction of the first ever oil refinery in the country has made the government taking an heightened focus oil exploration. As a result, the oil exploration licenses have become a major obstacle for conservation work in Mongolia as oil exploration licenses that override any attempt establishment of new local and national protected areas, especially in steppe and desert steppe areas in GG6 core areas.

37 Invest Mongolia | Investment and Trade Agency of Mongolia. <https://investmongolia.gov.mn/metals-and-mining/extracted> on 10 January 2025

38 Chimed-Ochir et al. 2010. Filling the Gaps to Protect the Biodiversity of Mongolia. Ulaanbaatar: Admon printing. 134 p.

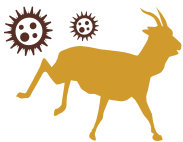
39 M. Heiner et al, Identifying Conservation Priorities in the Face of Future Development, Applying Development by Design in the Mongolian Gobi. 2013. TNC. Ulaanbaatar.

Furthermore, Mongolia is believed to hold significant reserves of rare earth elements (REEs), with estimates suggesting 31 million tons, second only to China. Despite this, only a few companies are actively exploring these resources, with a notable focus on Khotgor in the South Gobi, which has a 2-million-ton resource of REOs. However, mining activity poses a growing threat to wildlife, particularly in areas like the Gobi Desert, where mining operations are expanding. The country also holds lithium and graphite prospects, with Canadian company Ion Energy leading the exploration in lithium.

Many other deposits, though documented, remain stagnant as private owners hold licenses without the resources or expertise to develop them. This lack of exploration, compounded by outdated geological data, limits Mongolia's potential in the global battery metals market. Additionally, environmental concerns are rising, especially with rare earth mining, which often generates radioactive waste and could intensify pressure on Mongolia's wildlife and ecosystems.

Mongolia's government is keen to attract investment for critical minerals, yet the required infrastructure and regulatory framework remain underdeveloped. As mining advances, the impact on local wildlife, particularly in sensitive desert regions, could be severe, highlighting the need for careful, sustainable management of these resources.

DISEASE TRANSMISSION



With Mongolia having approximately 61 million head of livestock, animal epidemics of viral and bacterial origins continue to cause substantial economic losses. Infectious animal diseases can be endemic with occasional human cases and pose serious public health risks, due to the fact that rural households are involved in raw meat processing. Common threats are foot and mouth disease, rabies, equine and camel influenza, avian and swine flu and anthrax. Foot and mouth disease outbreaks happen most frequently, affecting cloven-hoofed animals, including domestic sheep, goats, cattle and camels. As a fatal disease to young animals, it becomes extremely challenging to control when transmitted to wild herbivores, such as the Mongolian white-tailed gazelle⁴⁰. In the fall of 2016, first time the outbreak of PPRV among domestic sheep and goats in western Mongolia was confirmed, probably originating from uncontrolled transboundary livestock movements.

40 Mongolia: Environmental Performance Reviews. 2018. UNECE. New York and Geneva, 2018

Although the vaccination campaign successfully curbed the epidemic in livestock, on December 27, 2016, deaths among the Mongolian saiga antelope from PPRV infection were confirmed; later, deaths from PPRV infection of Siberian ibex and goitered gazelle were also confirmed. In the following months, thousands of critically endangered Mongolian saiga died⁴¹. More detailed impact of the Foot and mouth disease in AHEC Mongolia and PPRV in ASER Mongolia are described in the respective strategies. Most households had knowledge about zoonotic disease transmission (74%) but far less recognized the risk of reverse zoonoses, or human-to-animal disease transmission (53.3%)⁴².

POACHING



The first *Silent Steppe* report⁴³ published in 2006, revealed that the wildlife trade is valued at US\$100 million annually and is causing catastrophic declines of important species in Mongolia. It highlighted that wildlife trade was no longer just a part of the cultural fabric; it was also big business with annual trade for some species counted in the tens of thousands, even millions of specimens. Transition to market economy that opened of borders with China, with its dominant economy and enormous capacity to absorb resources, has resulted in a shift in trade routes but a rapid re-escalation in wildlife trade, with concomitant declines in economically important wildlife species resulting 85% of decline in Mongolian saiga population, 92% decline of red deer population, 75% in Argali sheep, 75% in Siberian (Mongolian) marmot within 20 decades at most.

The second *Silent Steppe* report⁴⁴ finds that within 10 years the crisis not only continued but got worsened and dispersed criminal networks using a variety of illegal methods and an 'on-demand' supply model have become a major part of Mongolia's IWT problem. The report highlights the importance of tackling the Network and not the Individuals as evidenced by 12 different criminal networks being the object of 7 undercover investigations with an estimated value of their illegal wildlife operations of 15 million USD.

A total of 65 cases of poaching and illegal trade for target species (snow leopard - 4, argali - 7, Siberian ibex - 9, Dalmatian pelican - 7, Mongolian saiga - 1, and Altai snowcock - 37) has been recorded

41 Pruvot et al. 2020. Outbreak of Peste des Petits Ruminants Virus among Critically Endangered Mongolian Saiga and Other Wild Ungulates, Mongolia, 2016–2017. *Emerging Infectious Diseases*. (2020) vol. 26, No. 1.

42 Barnes et al. 2020. Knowledge and practices surrounding zoonotic disease among Mongolian herding households. *Pastoralism: Research, Policy and Practice* (2020) 10:8

43 Wingard and Zahler. 2006. *Silent steppe: The Illegal Wildlife Trade Crisis*

44 Wingard, J. et al. 2018. *Wildlife Trade Crisis, Ten Years Later*. Zoological Society of London, London UK, Legal Atlas and IRIM. 218p.

officially during 2021-2023 for entire Mongolia according to the WWF-Mongolia's 10 year (2013-2023) comprehensive environmental crime analysis.

In Mongolia, a sharp increase in illegal snow leopard trade was identified in 2019 and June 2020. Assessment report by WWF Mongolia in 2023 revealed that 18 cases of crime on snow leopard poaching and illegal trade was officially recorded in Mongolia for last 5 years (2019- 2023).

Although, this increase of snow leopard poaching could also be the result of the increased investigation and cooperation of the law enforcement agencies, there are concerns that it could also be reflection of global level raise in demand of the snow leopard body parts to replace the increasingly “hard to obtain” body parts of tigers and other rare wildlife.

Similarly, Mongolian gazelle could also be facing a increased pressure from global demand from a potential commercial shift from saiga to gazelle horns. Recent evidence indicates this troubling trend, highlighted by rising prices for gazelle horns and a market in China offering \$12 per gazelle head.

Snow leopards along with other predator species, like wolves are prosecuted by locals due to livestock predation. As mentioned in a report by TRAFFIC, the main reason for snow leopard killing is retaliatory (55%), it also mentioned that roughly half of the retaliatory killing of snow leopard entered illegal trade in Mongolia (Nowell, Li, Paltsyn, & Sharma, 2016). Once the animal is killed, it is likely to be sold at the market to gain more benefit. Thus, it is likely that a large chunk of the retaliatory killing could end up at the black market for sale, mostly as skin.

OVERGRAZING



The threats posed by overgrazing is also impacting across all programmatic focus areas with higher impacts concentrated around ecologically important patch habitats like open water sources, wetlands and areas easy to access market and public social services.

Encompassing ~2.6% of the global grasslands and ~80% of Mongolia's territory, Mongolian grasslands have been used by pastoralists for thousands of years. Now it supports ~70 million livestock and livelihoods of 29% of all working-age Mongolian population, contributing to ~15% of national GDP⁴⁵.

⁴⁵ Banzragch Nandintsetseg *et al.* 2021. Risk and vulnerability of Mongolian grasslands under climate change. *Environ. Res. Lett.* 16 034035

However, Mongolia's pastureland has experienced rapid degradation over the past two decades due to climate change and inappropriate grazing patterns. Livestock numbers have doubled from 32 million to 64.7 million between 2010 and 2023⁴⁶. Since the country's transition to a market economy in the 1990s, cyclically increasing livestock numbers driven by demand for cashmere and the need to mitigate climatic and economic risks on poorly managed public rangeland have disrupted traditional animal husbandry practices. Weak infrastructure, social challenges, and a shortage of water sources have led herder families to concentrate near settlements, lakes, and rivers, resulting in high livestock density that significantly degrades critical ecosystems like wetlands, peatlands, and riparian areas.

The National report on rangeland health⁴⁷ estimated that as of 2016, 42% of monitoring sites were judged to non-degraded state; 13.5 % in slightly degraded, 21.1 % in moderately degraded; 12.8 % in heavily degraded and 10.3 % in fully degraded level, showing that the degree of degradation has increased in the last two years. The proportion of sites that were classified to a non to slightly degraded level has decreased by up to 10% while sites classified to heavily or fully degraded level has increased by 4.3-5.9%. It also concluded that about half of Mongolian pasture area still have yet lost essential characteristics as pasture ecosystem if succeed to change present improper utilization practice and from then within 10 years Mongolian pasture can recover or improve the situation.

The livestock sector of Mongolia is not just one of the economic sectors but a complex totality of socio-cultural and economic activities that constitutes the backbone of Mongolian tradition, having a millennia-long history. The sector currently supports the livelihoods of over 300,000 nomadic people engaged in traditional livestock farming and provides employment opportunities for a much larger population through primary production, processing, input supply including fodder and veterinary services and related activities⁴⁸.

Unsustainable or uncoordinated land management practices, coupled with misaligned social policies, are leading to the degradation of Mongolia's pastureland.

46 https://1212.mn/en/statistic/statcate/573054/table-view/DT_NSO_1001_021V1

47 Densambuu, B. et al. 2018. National report on the rangeland health of Mongolia: Second Assessment. Green Gold-Animal health project, SDC. Ulaanbaatar.

48 Ministry of Construction and Urban development of Mongolia and JICA. 2021. Sector Report on Crop Farming, Livestock Farming, Mining, Manufacturing and Tourism for The Project for Formulation of National Comprehensive Development Plan

UNREGULATED TOURISM



Following its pandemic-induced slump, Mongolia's sector has recovered dramatically in most regions of the world. Mongolia is no exception to this growth with post-COVID tourism representing the country's third-largest economic sector after mining and agriculture and contributing 7.2% to national income and 7.6% of total employment⁴⁹. These statistics refer to the industry as a whole in the country and include many different forms of tourism, some of which are not compatible with the objectives of sustainable, green development⁵⁰.

While the threat from the tourism sector has not been fully assessed, it is becoming evident that growth is putting increasing pressure on certain protected areas and iconic species and is leading to 'aesthetic pollution' that in turn, poses a serious threat to tourism activities. UNDP commissioned study showed that approximately 50% of foreign tourists visit PAs and account for 10-15% of total visitors, while domestic tourists constitute 85-90% of the visitors to the PA⁵¹.

JICA commissioned study showed that the number of visitors to specific areas of major sightseeing or tourist spots has increased sharply recent years: the number of domestic tourists in Gobi-Gurvansaikhan NPA increased from 5,257 people in 2015 to 12,995 visitors in 2019. In Khamar Khiid monastery visitors rose from 40,200 to 67,838 during the same time⁵².

49 World Bank. 2021. Mongolia: Fostering Inclusive Tourism Development in the Aftermath of COVID-19. Washington DC.

50 Eternal Mongolia: PFP Strategic plan. 2024. TNC

51 Flores M. Ganzorig G. Khorolmaa S. 2015. An economic valuation of contribution of ecosystem services of the network of Protected Areas to the economy of Mongolia. MET-UNDP. Ulaanbaatar. 68p.

52 Takenori Shimizu. 2021. Final Report: Data collection survey on sustainable tourism development in Mongolia. JICA. Kinki Nippon Tourist Corporate Business Co., Ltd. The TOA Institution, QUNIE Corporation

GOALS FOR GG6 PROGRAMME

Overarching goal of the GG6 programme is **“By 2030, critical ecological processes and habitats of globally threatened Gobi migratory species are functionally secured by leveraging stakeholders’ stewardship and resources”**. The goal will be achieved by following **3 outcomes and 6 outputs** over the next 5 years of the strategic cycle.

Outcome 1. Sustainable and equitable resource management mobilized for GG6 programme through various sources

Output 1.1. Gobi’s Great Six campaign endorsed: A unified call for conservation

Outcome 2. Habitat restoration is fully integrated into policy documents focusing on critical ecological processes and habitats.

Output 2.1. Political will and cross-sector collaboration is built for ecosystem restoration based on successful launch on Oasis initiative

Output 2.2. Expand and strengthen GG6 core habitats such as PA, LPAs and OECM

Output 2.3. Development of comprehensive national standards and technical regulations for wildlife passages to ensure the safe movement of wildlife

Outcome 3. Stakeholder stewardship of natural resources is leveraged to benefit both wildlife conservation and the livelihoods of local communities.

Output 3.1 Science based recommendations system established for maintaining/keeping grazing capacity (e.g. pilot demonstration on biodiversity credit)

Output 3.2. Sound implementation of law on Natural resource use fee

THEORY OF CHANGE

The GG6 initiative's Theory of Change is based on the premise that, given the threats GG6 species face and ongoing conservation efforts, a consolidated approach is needed to recover species while enhancing habitat connectivity. However, the habitat fragmentation and loss caused by human and livestock taking over the grazing land and water sources as well as mining fuelled infrastructure development are considered the key threats of species and ecosystem loss. The situation is further exacerbated by the climate change impact that dry out the few surface water sources and poaching -infrequent- yet still impacting the wildlife population. To address this challenge, the GG6 programme targets main root causes: lack of targeted collaboration to halt habitat fragmentation and loss, increased competition for resources, and inadequate institutional and resource capacity.

These threats including its root causes will be mitigated through interventions that complement existing WWF conservation efforts, including the GG6 programme if successful fundraising is in place. The GG6 programme builds on three key outcomes for long-term viability:

- **Outcome 1.** Sustainable and equitable resource management mobilized for GG6 programme through various sources,
- **Outcome 2.** Habitat restoration is fully integrated into policy documents focusing on critical ecological processes and habitats,
- **Outcome 3.** Stakeholder stewardship of natural resources is leveraged to benefit both wildlife conservation and the livelihoods of local communities.

To achieve Outcome 1, the key pathway is to extend GG6 campaign that is gained widespread endorsement, marking a significant milestone in our mission to protect and conserve one of the world's most unique and ecological processes of the Gobi ecosystem - the migration of GG6 species. This campaign is a powerful call to action for both global and national partners, and local stakeholders. To ensure the success of the GG6 campaign, WWF Mongolia is actively seeking funding from diverse sources. By engaging with both private and public sectors, we aim to secure financial support that will not only sustain our efforts but also drive innovation in

conservation. We are calling on corporate partners, philanthropic organizations, and governmental bodies to join us in protecting the GG6 for future generations. We invite businesses to be part of this impactful initiative through strategic partnerships, sponsorships, and contributions. By aligning with GG6, companies will not only demonstrate their commitment to environmental sustainability but also enhance their brand visibility and reputation. Through ongoing dialogue, community outreach programs, and joint initiatives, we aim to strengthen our partnerships and ensure that all voices are heard. Stakeholder engagement is essential to the success of this campaign, and we encourage everyone who is invested in the future of the GG6 to get involved and help shape the direction of our work.

To ensure the resilience and functionality of ecosystems, Outcome 2 focuses on the full integration of habitat restoration into provincial, regional and national policy documents, with an emphasis on protecting critical ecological processes, habitats including PA, LPAs and OECM area. This outcome acknowledges that without policy-level commitment, efforts to restore degraded habitats and protect biodiversity will remain fragmented and unsustainable. The pathway to achieving this outcome begins with Output 2.1, which aims to build political will and cross-sector collaboration for ecosystem restoration. This is catalyzed by the successful launch and promotion of the Oasis Initiative—a flagship restoration effort that demonstrates tangible benefits of ecosystem rehabilitation based on 100-1000-10000+ project supported by WWF Switzerland. The Oasis Initiative serves not only as a proof of concept but also as a platform for aligning diverse stakeholders, including government agencies, civil society, and the private sector, under a shared vision for restoration. WWF Mongolia will continue to support the existing PAs and LPAs and promote new PAs that serve as a haven for GG6 species under Output 2.2. It will also closely work with the Border troops to ensure that border protection zones become sound OECM area for GG-6 species. Output 2.3 focuses on the development of comprehensive national standards and technical regulations for wildlife passages. These standards are essential to ensure the safe movement of wildlife across fragmented landscapes, addressing a key ecological process that underpins species survival and ecosystem connectivity. These technical regulations support policy integration by providing the practical tools and guidelines needed to implement restoration at scale, especially in infrastructure planning and land-use management. Together, these outputs contribute to the long-term goal of embedding habitat restoration into policy frameworks in a way that is actionable, collaborative, and grounded in ecological science. Through this change pathway, the initiative supports the

creation of a more connected, resilient natural environment that can support both biodiversity and human well-being.

Outcome 3 aims to strengthen stakeholder stewardship of natural resources in a way that produces mutual benefits for wildlife conservation and local community livelihoods. The core belief underpinning this outcome is that conservation efforts are most sustainable when local communities are empowered to act as stewards of the land and when their economic well-being is directly linked to environmental health using innovative tool such as biodiversity credit. The change pathway begins with Output 3.1, which focuses on establishing a science-based recommendation system for maintaining grazing capacity. Overgrazing and weak management of natural resources including rangelands are key threats to both biodiversity and rural livelihoods. This output ensures that grazing practices are informed by ecological data and tailored to specific regional contexts, allowing communities to optimize livestock productivity while safeguarding rangeland ecosystems. By providing accessible, evidence-based guidance, this system enhances community decision-making and long-term land stewardship. Complementing this, Output 3.2 supports the sound implementation of laws governing natural resource use fees. The effective and transparent implementation of the natural resource use fee law is a critical step toward sustainable environmental stewardship and securing long-term funding for conservation efforts. By establishing a capacity in planning, collecting and implementing of the NRUF, we aim to generate sustainable funding streams that directly contribute to preserving the GG6. Together, these outputs build the foundation for a more inclusive and sustainable conservation model, where local stakeholders are not just passive beneficiaries but active managers of natural resources. Through the alignment of economic incentives, scientific guidance, and legal enforcement, this approach fosters a long-term, mutually reinforcing relationship between wildlife conservation and community livelihoods.

These efforts will be supported by enabling conditions across finance, communications, and partnerships. Key actions include advocating for the conservation of GG6 species at both national and international levels, strengthening governance systems at local and national scales, securing sustainable funding, and promoting market-based incentives and behavior change campaigns. Collectively, these measures contribute to the overarching goal of WWF Mongolia's strategic plan: **Maximize, Maintain, and Mitigate** (Figure 1. Conceptual model for GG6 programme).

OPPORTUNITIES FOR INNOVATION

Climate change is rapidly altering the Gobi region's water availability, drying up the few surface sources that both people and wildlife depend on. This threat demands a robust body of research on hydrological dynamics and ecosystem thresholds in the region. At the same time, innovative, community-led solutions such as artificial oases, green infrastructure, and adaptive water-sharing agreements can offer practical responses. Such interventions must be grounded in rigorous, localized climate modeling and co-designed with affected communities.

The migration of GG6 species is not only an ecological marvel but a foundational process for ecosystem health. Mapping habitat fragmentation and modeling future scenarios under infrastructure expansion and climate stress will help identify key ecological corridors. Innovation is needed in the design and deployment of wildlife passages and habitat restoration interventions—tailored to Mongolia's arid and rugged landscapes. Incorporating remote sensing, AI-driven monitoring, and modular infrastructure models could greatly enhance the scale and sustainability of these efforts.

The development of science-based grazing management systems, tailored to local ecological and socio-economic contexts, is essential. There is also room for innovation in economic mechanisms—ranging from mobile platforms to track natural resource use fees to the development of market-based models like eco-labels, ecosystem service payments, or conservation-linked value chains.

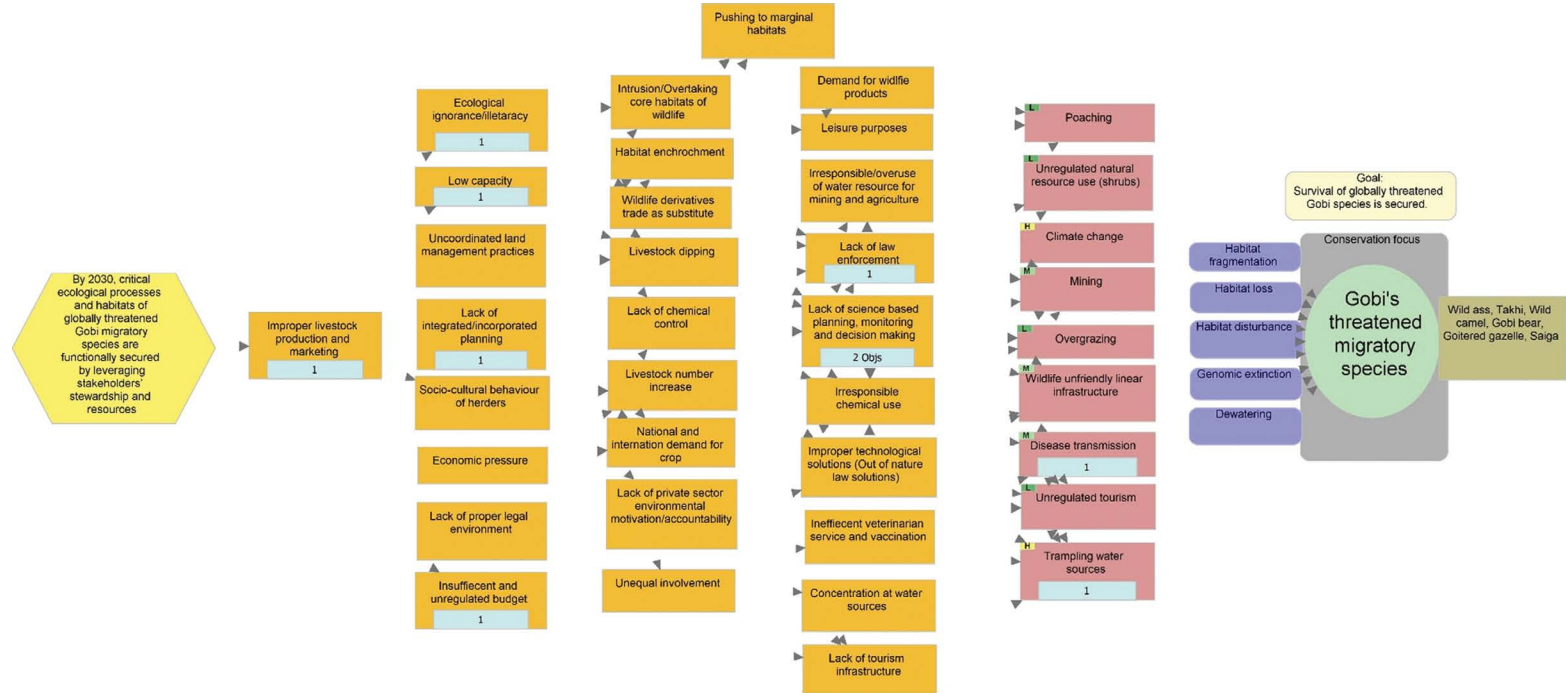
Innovative governance tools—such as digital coordination platforms or scenario-based decision support systems—can help facilitate cross-sectoral collaboration. The success of initiatives like the Oasis Initiative should be rigorously evaluated and translated into scalable policy guidance.

At the same time, innovation is needed to engage the private sector in ways that go beyond traditional sponsorships—such as through performance-based contributions, ESG-aligned partnerships, or conservation-linked supply chains that embed biodiversity into corporate responsibility agendas.

Leveraging immersive storytelling tools such as VR, gamified citizen science, and social media influencers can help personalize the GG6 cause and attract broader engagement. Lastly, a strong monitoring, evaluation, and learning (MEL) system is essential—not just for accountability, but for innovation. The GG6 initiative would benefit from multi-metric monitoring systems that track ecological, social, and economic impacts over time. Integrating AI and machine learning can uncover patterns and feedback loops that inform adaptive management. Transparent, open-source data platforms can also build trust among stakeholders and foster a shared understanding of progress and gaps.

In conclusion, the GG6 initiative holds the potential to become a global model for species conservation in arid, human-impacted ecosystems. Realizing this potential will require targeted research to fill knowledge gaps and innovation to catalyze systemic change—from habitat restoration and climate adaptation to policy reform, financing, and community empowerment. By prioritizing these areas, WWF Mongolia and its partners can not only safeguard the GG6 species but also drive transformative conservation that benefits ecosystems and people alike.

Figure 1. Conceptual model for GG6 programme



RESULT CHAIN

The first cycle of output along with its main activities to be done has been developed. Further development and expansion will depend on the availability of funding and the successful acquisition of projects under the GG6 programme.

PMEL

This section will be developed once funding for the GG6 programme has been secured.

PROGRAMME IMPLEMENTATION PLAN

This section will be developed once funding for the GG6 programme has been secured.

LEARNING PRIORITIES

This section will be developed once funding for the GG6 programme has been secured.